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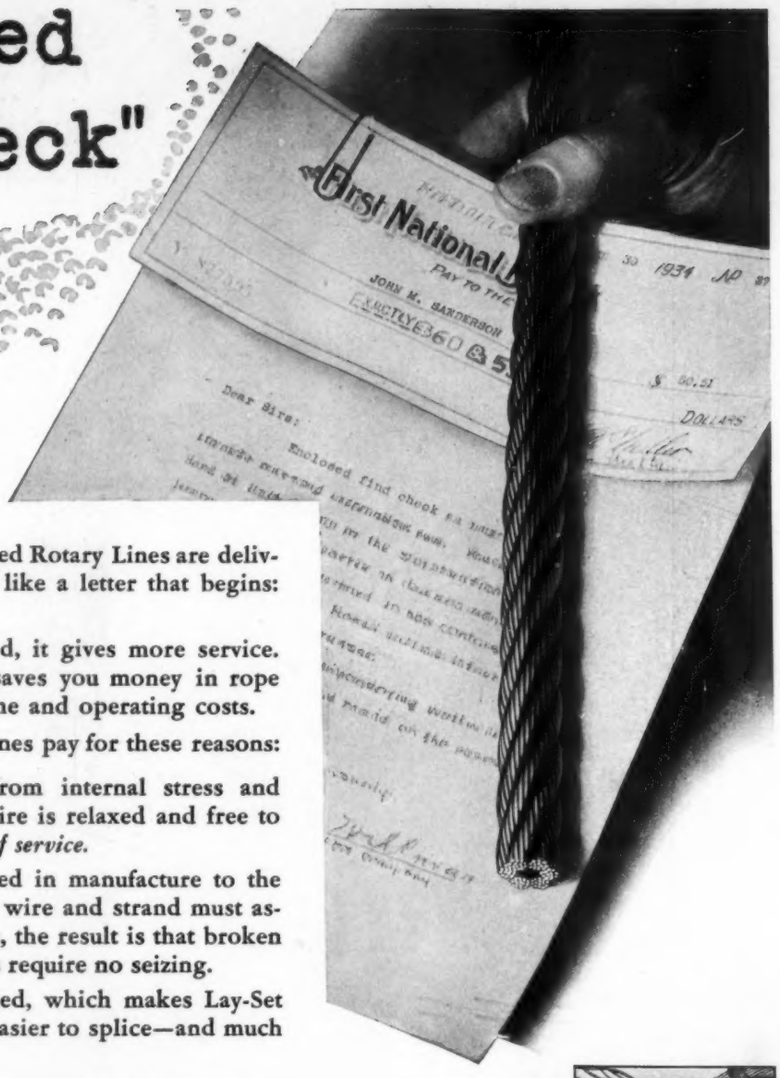

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THE OIL AND GAS JOURNAL

Volume 33
Number 29

December 6, 1934

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OIL MAN'S CALENDAR

December

7-8—Fort Worth, Tex., fifth annual meeting, Independent Petroleum Association of America.

8—Okmulgee, Okla., Petroleum groups, Oklahoma Section, American Chemical Society, 2 p.m.

19—Los Angeles, Calif., California Oil and Gas Association, annual banquet and Xmas Jinks, Biltmore Hotel.

January

8-10—Milwaukee, Wis., annual convention and Equipment Show of Wisconsin Petroleum Association, Parkinson Hotel.

14-18—Detroit, Mich., Society of Automotive Engineers, annual meeting, Book Cadillac Hotel.

17-18—Minneapolis, Minn., Northwest Petroleum Association, Minnesota division, West Hotel.

February

7-8—Louisville, Ky., Kentucky Petroleum Marketers Association.

12-14—Columbus, Ohio, Ohio Petroleum Marketers Association, annual dinner, Deshler-Wallick Hotel.

18-21—New York, Petroleum Division, A.I.M.E. (A.I.M.E. annual meeting).

March

21-23—Wichita, Kans., American Association of Petroleum Geologists, annual meeting.

April

8-13—Houston, Tex., Oil Equipment and Engineering Exposition.

11-13—Dallas, Tex., Petroleum Industry Electrical Association, Baker Hotel.

22—New York, American Chemical Society, semiannual meeting.

(?)—Wichita, Kans., Kansas Oil Men's Association.

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If I Could Only Talk

I'd tell you things

you ought to know

OUR whole outfit has been trying for years and years to tell you how good I am, and while a lot of other folks must have listened and been convinced, it seems that you, and you, and you don't know how good I really am.

Mister, let's have an understanding before ol' Lady Luck forgets to smile on you one of these days and you shoot a seven when your point was nine!

With no apologies whatever to Dizzy Dean, I admit I'm plenty good. Other Float Shoes can't do what I can, and I'll tell you why ▲ ▲ ▲

In the first place, I'm strong—like my whole family—stronger than your casing, because I'm made of a special concrete and inside me there's a Bakelite ball which seals against rubber and Bakelite seats.

And, Mister, there's no foolin' about my holding tight against any pressure.

I let the cement pass down easily, but when the pumps stop, that floating Bakelite ball pops up against the rubber and Bakelite seats and your cement stays put.

But it's when you go to drill me out that I'm worth a carload of ordinary Float Shoes, Float Collars and Guide Shoes. I'm a strong, tough feller until the bit starts drilling thru me. Then I give up e-a-s-y, crumble to pieces and am soon in the slush pit ▲ ▲ ▲ ▲ ▲ ▲ and there you are, with the hole all ready for coring or drilling, without any cracks in your cement job and no chunks of metal left to hold up the bit or start a crooked hole.

There's more you ought to know, so why not ask Baker to send you all the dope? They'll send it free.

And I wouldn't put off writing, either

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"Hot" Oil Output in East Texas in Past Week Reported as Averaging 50,000 Bbls. Daily

By ANDREW M. ROWLEY

BREAKING its record by holding crude oil production below Federal and State allowables during the week ending November 24 seemed to be too much for Texas and that State last week again went over the 1,000,000-barrel per day mark with an increase in output greater than the total increase of 51,377 barrels daily recorded for the whole United States. Scouts covering the East Texas Field report "hot" oil production in that area during the past week averaged 50,000 barrels a day.

Col. E. O. Thompson, of the Texas Railroad Commission, has presented a request to the Petroleum Administration asking that the allowable for Texas be increased during December and January to the extent of 1,000,000 barrels a month so that this 2,000,000 barrels of crude might be produced for export to England, operators having what is considered by them a valid offer for purchase of that quantity of crude oil at $1.20 a barrel. The request is considered as rather unusual in light of the positive attitude of the State of Texas that it and it only has the power to decide what quantity of crude oil shall be produced within the State. And, as long as the State's allowable is not exceeded, Section 9c of the Industrial Recovery Act, relating to shipments in intrastate commerce cannot act to restrict shipments, that section covering only shipments in excess of the quantity permitted to be produced by the State's regulatory body. In other words, according to the contention of State officials of Texas, if the State wishes to increase its allowable crude oil production, it has the power to do so and no shipments in interstate commerce, within the figure set by the State, can be construed as illegal.

An order relating to the intrastate shipment of crude oil and refined products is expected to be issued by the Texas Railroad Commission within a day or so and the State tender board then will have authority to pass upon all requests for tenders for shipments within the State of Texas. Much interest attaches to this order and to what effect it will have on large quantities of gasoline held in storage in East Texas.

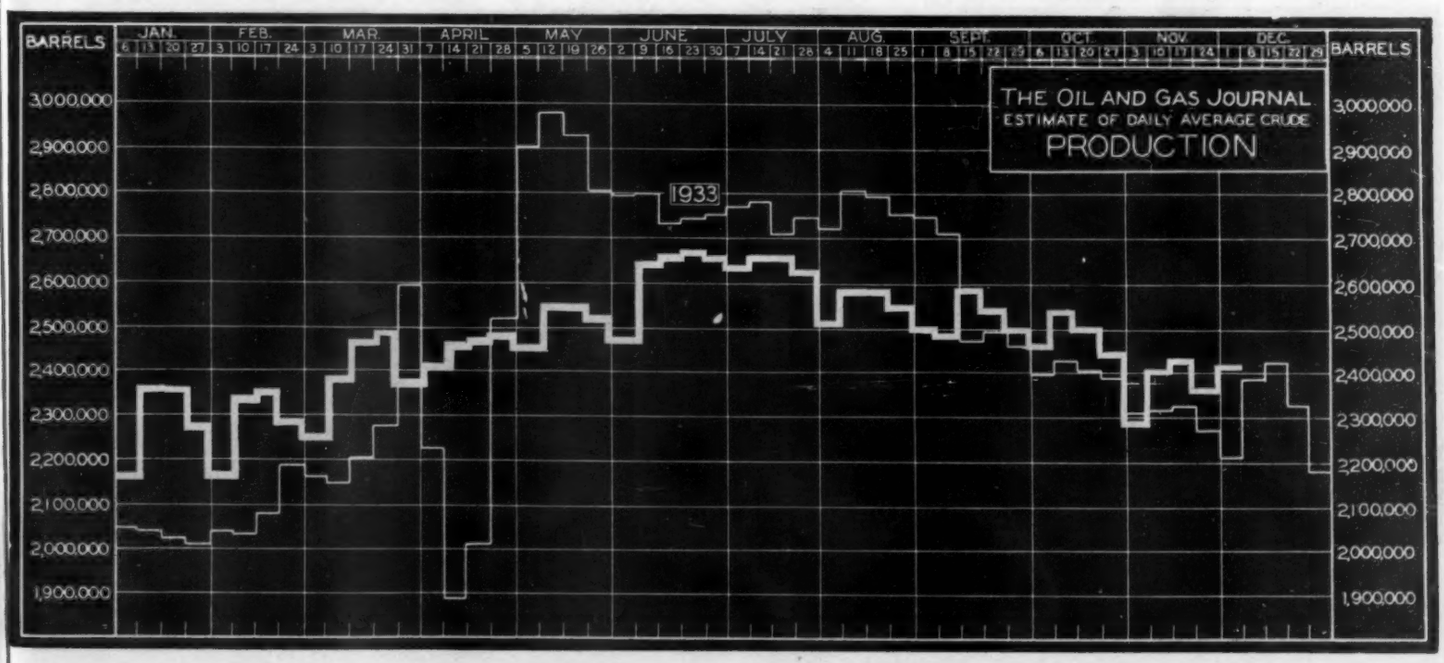
The petroleum industry believes the Cole investigating committee will not recommend to Congress any legislation tending to give the Federal government control over crude oil production and also that the committee feels no good purpose whatever would be served by any attempt to divorce pipe lines. It is felt legislation regulating production within a State would be unconstitutional and that divorcement of pipe lines from present owners is entirely unfeasible. The committee will present its report on its investigation of the petroleum industry to the clerk of the House when Congress convenes next month.

Crude Oil Production in the United States

Estimated daily average production for the week ending December 1, and a comparison with previous week and Federal allowables follow:

		Federal allowable	
Oklahoma—	Dec. 1	November	Nov. 24
Oklahoma City	158,250	.....	136 525
Seminole-St. Louis	75,650	.....	85,625
Remainder of State	229 700	.....	229,525
Total Oklahoma	463,600	459,300	451,675
East Texas—			
Lathrop	176,091	.....	167,150
Kilgore	149,624	.....	129,323
Joiner	137,453	.....	125,120
Total East Texas	463,168	.....	421,593
West Texas	132,379	.....	130,396
North Central Texas	88,313	.....	81,746
Texas Panhandle	59,763	.....	55,973
East Central Texas	43,090	.....	43.378
Gulf Coast—Texas	164,212	.....	164,647
Southwest Texas	61,084	.....	59,184
Total State of Texas	1,012,009	957,300	956,917
Kansas	127,300	125,000	122.900
North Louisiana	24,015	.....	24.045
Gulf Coast—Louisiana	83,843	.....	81.694
Total Louisiana	107,858	90,000	105.739
Arkansas	31,130	30,000	30,915
Eastern Fields (except Michigan)	103,000	96,000	102,000
Michigan	26,885	29,000	25,139
Rocky Mountain	97,090	91,700	96,710
California—			
Santa Fe Springs	35,600	.....	39,100
Long Beach	53,000	.....	59,650
Mountain View	12,400	.....	10,900
Elwood	9,900	.....	10,900
Kettleman Hills	60,000	.....	62,100
Remainder of State	280,600	.....	294.350
Total California	451,500	462,000	477.000
Total United States	2,420,372	2,340.300	2,368,995

Increase 51,377 Bbls. Daily.



Governors' Conference Against Federal Control

By ANDREW M. ROWLEY

PONCA CITY, Okla., Dec. 3.—Steps were taken here today at a conference of governors and other representatives of oil producing states to obtain definite opinions from the executives of these states on the matter of Federal control, imports of crude oil and refined products, continuation of Section 9c of the Industrial Recovery Act relating to interstate shipments of "hot" oil, and the consummation of an interstate compact for the petroleum industry. Four resolutions expressing the personal sentiment of the governors and representatives of Oklahoma, Texas, Kansas and New Mexico were presented to the conference. These resolutions will be studied by the governors of all oil producing states in the country and these governors or representatives empowered to act for them, will be asked to meet again at Ponca City on January 3 next to give their views on the resolutions and, possibly, to draft a form of an interstate compact for presentation to the different states and Congress.

The conference here today, called by Governor-elect E. W. Marland of Oklahoma and held at his home, brought together representatives of Oklahoma, Kansas, Texas, New Mexico, Wyoming, California, Louisiana and Arkansas and four members of the subcommittee of the Committee on Interstate and Foreign Commerce of the House of Representatives, who are investigating the oil business and who will prepare a report on conditions in the petroleum industry for presentation to the House of Representatives when it convenes in January.

Those in Attendance

Among those in attendance were Mr. Marland, J. Berry King, attorney general of Oklahoma; Mac Q. Williamson, attorney general-elect of Oklahoma; Patrick J. Hurley, former Secretary of War and now acting as an attorney for Mr. Marland; Northcutt Ely, former executive secretary to Secretary of the Interior Wilbur and author of a book on interstate compacts; James V. Allred, governor-elect of Texas; Jack Blalock, prominent oil man of Texas; Governor Alf M. Landon of Kansas; J. R. Pemberton, state umpire of California and Robert L. Patterson of California; Hiram Dow, New Mexico; John Farrell, representing Louisiana and Arkansas; Pierre La Fleiche, Wyoming; William P. Cole, Jr., chairman of the congressional committee, Congressmen Charles A. Wolverton, Samuel P. Pettengill and Edward A. Kelly, members of the congressional committee, and Earl Oliver, chairman of the stabilization committee of the A.I.M.E.

Strong opposition to any form of Federal control of the oil industry was expressed at the meeting, in fact, there seemed to be a unanimity of opinion against Federal control except on the part of Governor Landon who favors some form of Federal control to bridge over the period until something such as an interstate compact would become effective.

The conference approved enactment into permanent legislation of Section 9c of the Industrial Recovery Act which prohibits the shipment of crude oil or products in interstate commerce in excess of allowables set by the states.

Approval also was given to a recommendation that the President be empowered by Congress to limit imports of crude oil or refined products to a quantity which would protect the interest of producers and consumers in the United States.

Naturally, the approval of these two recommendations did not bind the states themselves on the questions, the representatives expressing their own personal views on the matters.

Oppose Federal Control

The statement was made at the meeting that all representatives of states, authorized to speak for their states, opposed Federal control of the oil business in any form. This did not include Governor Landon, who arrived too late to take part in the executive conferences held prior to the open meeting and at which conferences the views opposing Federal control were expressed.

Texas, regarded as the pivotal state in the matter of an interstate compact, has not turned thumbs down on the proposal, as many previously seemed to think. Mr. Allred, governor-elect of Texas, made his position quite clear. He says he is willing and anxious to cooperate with all other oil producing states in all matters affecting the petroleum industry and is and will continue

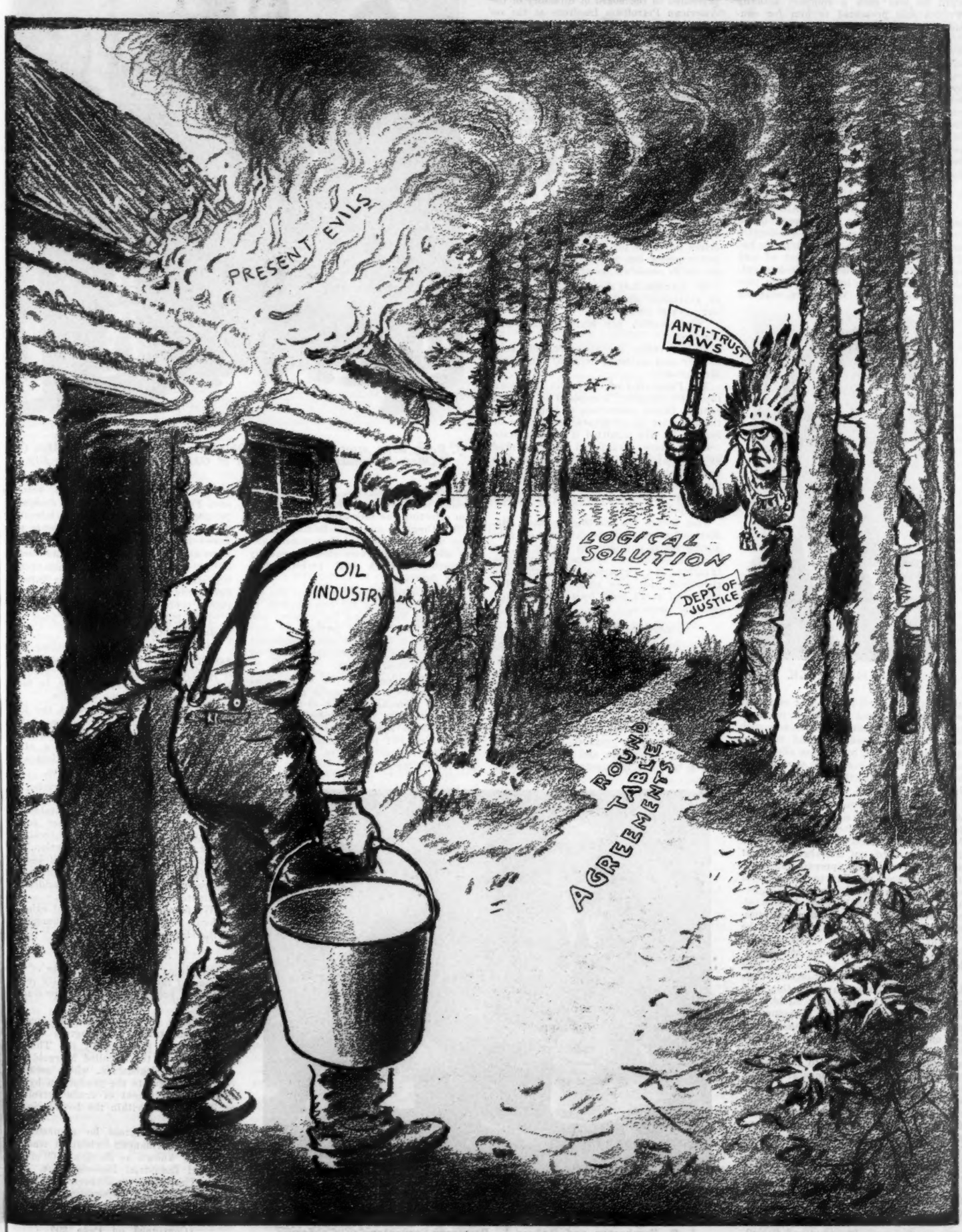
(Continued on Page 10)

Governor Alf M. Landon of Kansas; Governor-elect E. W. Marland of Oklahoma and Governor-elect James V. Allred of Texas

—Photos by Alvin C. Krupnick.

Left to right: Congressmen Samuel B. Pettengill, William P. Cole, Jr., and Charles A. Wolverton, Pierre La Fleiche, Robert L. Patterson, W. H. McFadden, Northcutt Ely, William Jenefer, John Farrell, J. Berry King, Governor Alf M. Landon, Governor-elect E. W. Marland, Mac Q. Williamson, Governor-elect James V. Allred, Congressman Edward A. Kelly, J. R. Pemberton, Hiram Dow, Patrick J. Hurley and Jack Blalock

"Put Your House in Order or Else"—Ickes



—Drawn exclusively for The Oil and Gas Journal

to give careful study to the matter of an interstate compact. He is not willing to commit himself on a compact until he sees such a compact actually written and presented to him for consideration.

Mr. Allred is unalterably opposed to Federal control of intrastate activities in any form whatever. He will never consent to having Texas definitely bound by any crude oil production allocations set for it by any outside source. In this connection Mr. Allred said: "The Federal Government has no right or power to tell any state how much oil it should produce and if it attempts to do so, I believe the courts will uphold our contention in this matter."

Texas and Compact

It seemed clear from Mr. Allred's remarks that Texas is not opposed to an interstate compact and is in a receptive mood regarding such an agreement but Texas will not become a part of any agreement which would permit any outside commission or body to set its production allowables. Mr. Allred said his

JACK BLALOCK

state has accepted for a long time the market requirement estimates prepared by the U. S. Bureau of Mines and such estimates are considered valid evidence in hearings held on production allowables but that the State can at any time it desires, disregard these estimates entirely.

Several at the conference seemed to feel if Texas would not permit the setting of production allocations by an outside body or commission it could not possibly enter into an interstate compact but this view did not prevail generally. It was believed possible to formulate a compact which would meet the requirements of Texas and have production allocations set by a commission of representatives of the different states and the Federal Government on which commission Texas would have proper representation.

It was pointed out orders of the Texas Railroad Commission on production allocations now differ but very little from figures set by the Federal Government, consequently, there has been no disposition on the part of Texas or any other oil producing state to ignore these allocations or to go contrary to the figures determined by the governmental agency. In other words, it would not be a difficult matter for a commission representing the states, with the co-operation of the Federal agency, to set allocations agreeable to the different states and to Texas and as long as such allocations coincided with the views of the Texas Railroad Commission, Texas could be a party to an interstate compact and co-operate and act with the other states in such a compact.

Governor Landon favors the recommendation made by the Planning and Coordination Committee regarding proposed Federal legislation, which recommendation is the same as the minority report presented to the board of directors of the American Petroleum Institute at the recent convention in Dallas and voted down by the Institute directors. He feels an interstate compact is desirable but he wants to make sure that there is some sort of Federal control during any period between expiration of the code for the industry and the effective date of such a compact. He is willing to accept the Thomas-Disney bill or any other form of Federal control, if necessary, although he prefers a limit being placed on the time Federal control would be effective. He said if there were no form of Federal control, crude oil prices would drop to 10 cents a barrel within 10 days.

Mr. Marland said the first interest of governors was to producers of our natural resources and indicated present prices for crude oil are too low and that better prices are justified and would be an aid to conservation of crude oil.

Mr. Landon said the motivating thought of governors should be conservation of our natural resources.

"Conservation for what?" asked Mr. Marland.

"Conservation for an emergency such as war and national defense," answered Mr. Landon.

Mr. Pemberton of California favors an interstate compact, is opposed to Federal control, favors restriction of imports and the retention as permanent legislation of Section 9c. He admitted if an interstate compact were formulated and accepted by the states, California would have to pass legislation setting up a state agency for allocating crude oil production. California at this time does not have such legislation.

Just before the meeting recessed Mr. Marland asked that the different oil producing states consider the matter of the need of a uniform system of severance taxation. Mr. Patterson asked that the governors also give some study to the matter of short term leases on the government domain.

Resolutions Being Considered

The resolutions offered for consideration by the governors of the oil producing states follow:

Marland's Resolution

"Be it resolved that the conference called at Ponca City, Okla., on December 3, 1934, by the governor-elect of that State, respectively suggest to the Committee on Interstate and Foreign Commerce, now acting pursuant to Res. 441, Seventy-third Congress, that it recommended the enactment of Federal legislation effecting the following objectives:

"1. Create a joint fact-finding agency upon which the Federal Government and the oil-producing states shall be equally represented, which will perform two major functions:

"(a) To periodically estimate the demand for petroleum for consumption in the United States and for export, and determine the relative portion of that demand which should be met by domestic production and by importation, and by withdrawal from storage.

"(b) To allocate to the states what part of the required domestic production should be furnished by each of them.

"2. Authorize the President, through such Federal agency as he may designate, to restrict importations to accord to the periodical estimates of the joint fact-finding agency.

J. Berry King, attorney general of Oklahoma; Patrick J. Hurley, Mac Q. Williamson, attorney general-elect of Oklahoma and Northcutt Ely

"3. Authorize the President, through such Federal agency as he may designate, to prevent the movement in interstate and foreign commerce of petroleum produced in violation of the above allocations and the products of such petroleum.

"4. Authorize the petroleum-producing states to voluntarily enter into an agreement, subject to the President's approval thereof, whereby they undertake:

"(a) To participate in the joint fact-finding agency.

"(b) To receive and consider that agency's findings as to demand and necessary production, and, to such extent as the state's laws may authorize, to make those recommendations effective.

"(c) To co-operate, through the joint agency, in the study and recommendation of uniform conservation laws and regulations which, if enacted by a state, will promote the maximum ultimate recovery of the petroleum reserves.

"The Federal statute which authorizes this agreement should make provision for the later adherence of other states. It should authorize the agreement to be made either in the form of a treaty or in the form of reciprocal legislation, and provide that the agreement shall become effective when the President approves it, and reserve authority to the President to terminate it by executive order.

"We favor the continuation of existing Federal statutes pending consummation of the state pacts."

Allred's Resolution

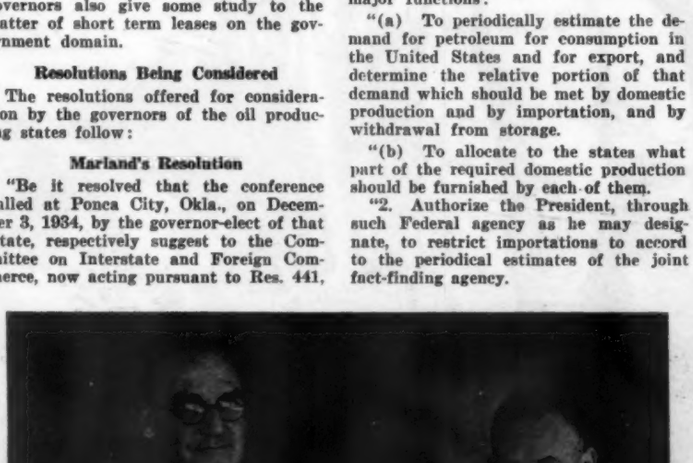
"Resolved: That it is the sense of this meeting of the governors and their representatives present from the oil producing states:

"1. That we are unalterably opposed to the enactment by Congress of any legislation of the type of the Thomas-Disney bill or the so-called Margold bill, or any other legislation, which seeks to control or regulate the production by the Federal Government of crude petroleum or its products within the boundaries of any state.

"2. That Congress be requested to enact into permanent legislation what is commonly known as Section 9-C of the National Industrial Recovery Act.

"3. That Congress authorize the President to limit the importation of crude petroleum and its products to an amount which, in his opinion, will properly pro-

(Continued on Page 29)



J. R. Pemberton and Robert L. Patterson, representing California

Washington Insists on Federal Rule; Buying Plan Due to Be Pigeonholed; Announce Contract Form Revisions

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Dec. 3.—If the oil industry is unable to control its markets and cannot correct other evils present in the industry the Government should regulate it to change those conditions, was the thought uttered recently by an official of the Petroleum Administration. His thought on the matter was that such action should be taken, and taken quickly, or else the major integrated companies would have driven from the field all independents now engaged in the industry, and leave the way clear for an uncontrolled monopoly costing the consuming public an untold amount of money.

It is his opinion that the industry should be turned over to the Petroleum Administration and regulated and controlled by that body, under the administration of the Secretary of the Interior. He does not believe that an interstate compact would be feasible because of the selfish interests of the various oil producing states, his opinion being that each state would strive to produce more than the other in order to exploit its own petroleum reserves.

He advocates turning the industry over to the Federal Government because it is an impartial agency, and is, in his opinion, qualified to make rules and regulations leading towards conservation and stabilization of the entire industry, giving control not only over production but also over refining, marketing and transportation.

The fact that this is what the administration had in mind last spring when the Thomas-Disney bill was finally introduced is clearly shown now that the "Margold Bill" has been introduced into the record of the Cole Congressional Investigating Committee. It has been learned that the only reason the "Margold Bill" was not introduced at the last session of Congress was that it was not politically expedient to do so.

This Margold Bill, however, was not the only suggested legislation which was under consideration at that time. There was another draft of an act which was quite similar to the one introduced into the record of the investigating committee, except that it dwelt in more detail on the regulation of marketing, going so far, it is claimed, as to provide for licensing of filling stations and retail outlets.

Pipe Line Draft

Rumor has it that there was still another proposal which was seriously considered which would not only have controlled production, refining, marketing and transportation, but provided for a cost survey of pipe line transportation. This survey would have been used as the basis for fixing pipe line rates. It has been said that this bill also contained a provision giving the Secretary of the Interior authority to divorce pipe lines, if he so desired.

While the administration is accusing the industry of inefficiency and mismanagement of its affairs, the Oil Administration has experienced oil men employed in the various divisions who are given routine tasks to perform. No advice or counsel is ever asked of these men, it has been learned, all problems which arise being turned over to law school graduates for determination.

If some detail is to be worked out, perhaps the oil men will be asked to dig out the pertinent facts, but no conclusion is ever arrived at by the men who are intimately acquainted with the correct solution of the problem. The easy and efficient method of answering problems confronting the Petroleum Administration is, apparently, not being taken by them now. Perhaps this attitude towards experience explains some of the ill-conceived actions of the Petroleum Administration.

Buying Plan

Administrator Ickes has submitted to the Department of Justice the gasoline buying plan which he recently disapproved and has asked that that department give him a ruling as to the legality of the plan. The plan which is being reviewed is the identical agreement which was declared to be illegal by the Administrator, and ordered suspended.

What action the Department of Justice will take is problematical. Opinion of some men in the industry is that no agreements or co-operative plans within the industry will be approved until the courts rule on the points raised in California by the Wilshire Oil Co. in attacking the legality of the Pacific Coast Agency Agreement. Wilshire alleges that the agreement on the coast tends to favor and promote monopoly, and is a violation of the antitrust laws and illegal.

If the plan is approved by the Attorney General it will be returned to Administrator Ickes and must be given his approval before operations may be started again. Whether this plan will be given the administrator's approval is doubtful, as he has already expressed himself opposed to its terms and not satisfied with the results which would be obtained from it. The decision of the Department of Justice should be placed before him within a few days, at which time it is expected to be pigeonholed.

Contract Forms

Commercial consumers of gasoline have been released from the use of standard contract forms CD-1 and CD-2 by order of the Administrator. CD-1 governed the sale of gasoline or other motor fuel in quantities of 100 gallons or over to commercial consumers, usually retail service stations, under the terms of which the applicable discounts were set by the standard form of contract. With the provisions suspended the discount allowed by each refiner, distributor, jobber or wholesaler may be set by him, and sales made according to the posted price less the applicable posted discount, at the point from which delivery is made.

Contracts may contain whatever top price, or flat price provisions the individual refiners, jobbers, distributors and wholesalers may elect, but no contract may be made for a period exceeding 12 months from the date the contract is made.

Contract form CD-2 covered spot sales to tank ship, barges and tank cars. Provisions were included in the standard contract form stipulating that the price to be charged must be the posted price in effect at the seller's place of business when the shipment was made and specifying the discount and the method of figuring discount.

CD-2 was abolished completely, and the provisions of CD-1 were suspended in all regions except Regions 5 and 6, which are covered by the Pacific Coast Petroleum Agency Agreement. It was stipulated, however, that in order for a commercial consumer to get the discount and the applicable price the purchases must be of at least 100 gallons in Region 1, 50 gallons in Region 2, and 25 gallons in Regions 3 and 4.

It is claimed by the Oil Administration that the result of this action will provide a free, competitive wholesale market, a condition which it is said was impossible to attain under the contract forms, even though there was practically no compliance by the industry with the terms thereof. Suspension of these provisions will also, it is contended, improve the competitive position of independent jobbers and distributors who, it is clamed, have been unable to compete with the major companies and abide by the terms of the contracts.

Labor Provisions

A meeting was held Friday at the Petroleum Labor Policy Board offices here between representatives of labor, stripper well operators, a representative of the Planning and Coordination Committee and the Labor Policy Board to determine an equitable definition of a

East Texas "Hot" Oil Output Increases and Intrastate Gasoline Shipments Gain

By L. E. BREDBERG

FORT WORTH, Tex., Dec. 3.—Shipments of refined products increased around 900 cars over the previous week, totaling 1,960 cars. Of these 628 cars were shipped under Federal tenders, 429 going outside the State and 240 loaded out for coastwise shipping. The greater number of shipments were within the State, 1,290 cars going to various points in Texas, of which only 220 cars had tenders. Untendered products amounted to 1,110 cars, refiners paying little heed to tenders on shipments within the State.

This increase in movement of products was due to refiners desiring to ship and dispose of as much of their stored products as they could before the expected order of the Railroad Commission gives that body power to check shipments. There were around 100,000 gallons of "hot" gasoline in storage, and the owners no doubt moved a large part of it during the week.

Shipments of refined products from East Texas for the week follows:

	Cars	Gallons
Gasoline	462	3,805,990
Casinghead gasoline	136	1,199,245
Topped crude	987	8,899,245
Fuel oil	125	1,208,520
Kerosene	27	214,650
Residuum	56	504,705
Gas oil	57	470,125
Distillate	101	821,455
Naphtha	2	18,130

Overproduction also increased during the week, operators running more oil from their wells to the plants to boost shipments and sales before they are stopped. A great number of cars was shipped under the label "topped crude." For several months much crude oil has been shipped under this guise. Shipments of this product increased around 147,000 bbls. this week.

There were 31 refineries operating and 52 shut down during the week, the operating plants handling 58,470 bbls. of crude per day, or about 23,000 bbls. more per day than they did the previous week. Overproduction was estimated as being doubled, to around 55,000 bbls. per day. If the commission does not issue its tender order immediately, operators and refiners will continue to take advantage of the time taken to issue the order, producing, refining and shipping as much intrastate as they can before they are put on notice.

The demand for crude has strengthened in the field and companies are again advancing money to operators to gain control of their production. The price of gasoline is also being strengthened although the third grade product is still selling at 10 cents per gallon in Fort Worth with the regular brand at 13 cents. These prices are expected to rise if the State Tender Order goes into effect. However, there will still be a considerable amount of the contraband product in storage, and the commission is expected to arrange some method by which the owners can dispose of it with least injury to the industry. Tenders may be granted on a small amount of it each week, until the tanks are emptied, although operators having illegal gasoline in storage may find some way of retaining a constant level in their tanks as it is being drawn off for shipment.

Some operators and refiners withheld from overproducing their properties and running their plants during the past two weeks in the hopes that the gaoline purchasing plan would be reinstated. However, they have no doubt come to the conclusion that no such plan will be readopted, and are starting to produce their properties again. This was no doubt partly responsible for overproduction increasing, and shipments of refined products gaining this week.

Daily average distribution from the field averaged 451,420 bbls. per day, 392,950 bbls. being transported by major pipe lines. This is around 38,000 bbls. over and above the daily allowable.

Operators awaiting the publication of the new state tender order are expecting an immediate court attack upon it.

A court test on the Federal Tender Board was due to come up at Tyler on December 1, before Federal Judge Randolph Bryant, who had granted a temporary injunction on petition of the Government against certain East Texas operators and refiners. The hearing has been postponed until possibly the middle of the month. Hearing to make permanent an injunction against McMurrey Brothers and others, restraining them from overproducing their leases, has also been postponed.

stripper well for the purpose of classifying such wells under the labor provisions of the code. The meeting adjourned without any decision being reached by the Petroleum Labor Policy Board, and will be reconvened during this week.

The public hearing starting today to consider revision of the labor provisions of the code was opened by representatives of labor. Their main point is the promulgation of a 30-hour week for the petroleum industry and a minimum wage of 60 cents per hour for common labor with a greatly increased differential for skilled employes.

Numerous representatives of employers will be heard by the board during the week, and the Labor Sub-committee of the Planning and Coordination Committee, through its chairman, H. H. Anderson of the Shell Petroleum Corp. is submitting a detailed brief covering labor statistics in the various branches of the industry.

STATE TENDER ORDER

AUSTIN, Tex., Dec. 4.—The Texas Railroad Commission will probably sign the tender order covering the intrastate shipping of refinery products when it meets in Houston on Thursday. Because the original order would freeze all refinery products in storage in the State, a provision is expected to be made which will permit tenders to be issued for all refined oil now in storage if made from legally produced crude. An effort is being made to liberalize the board's views to the extent that all stored products would be released.

Oil Companies Suffered Greatest Loss During Year of Largest Gasoline Sales in History

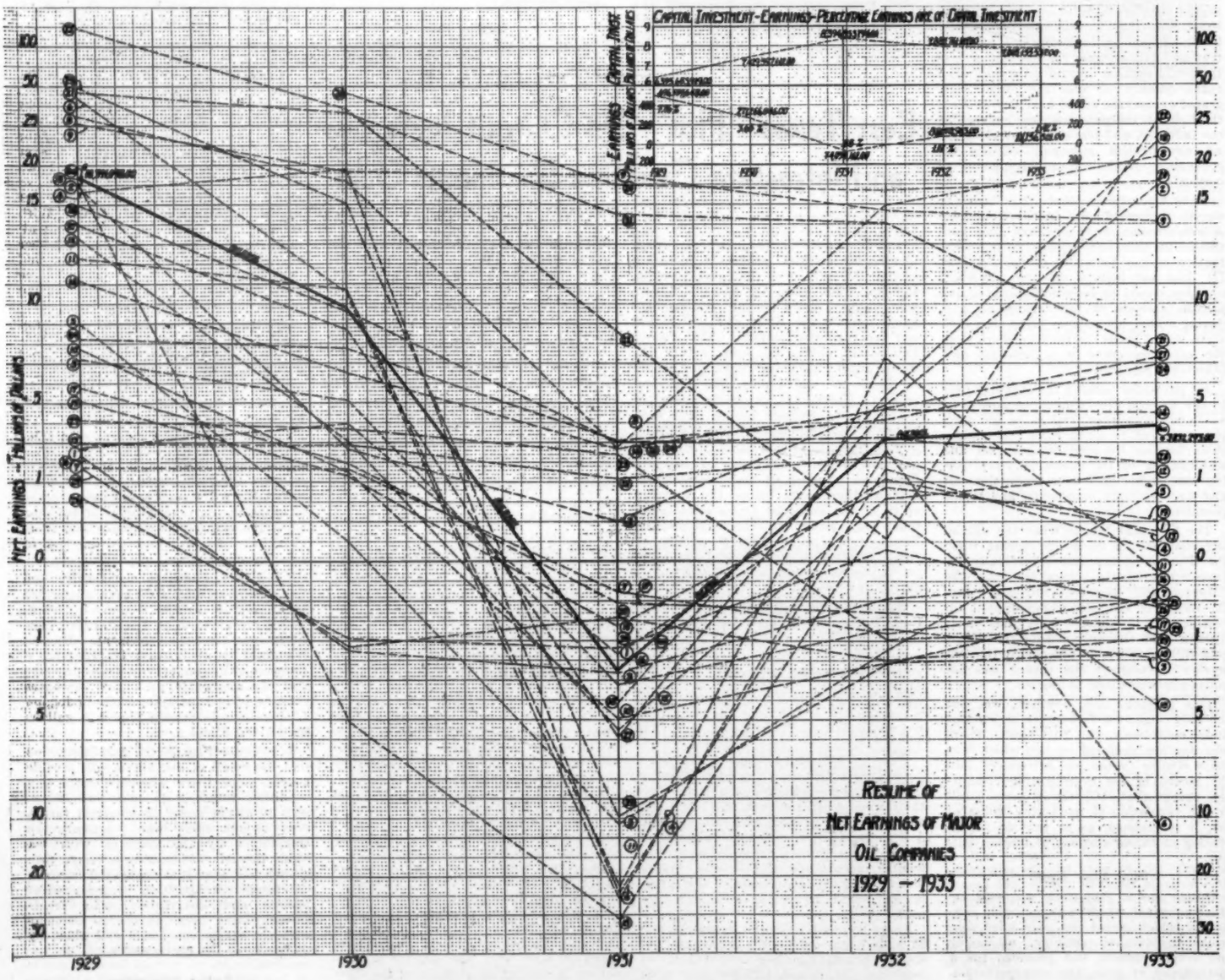
Many interesting points regarding operations of different companies in the petroleum industry are disclosed by a study of the chart below. This chart, showing a resume of net earnings of 29 prominent and active oil companies, was prepared by an oil company executive in Tulsa.

The point often emphasized that gallonage does not mean profits certainly is demonstrated conclusively by the chart. The petroleum industry enjoyed the all-time peak for sales of gasoline in the United States during 1931, yet the greatest decline in average net earnings was experienced during that year.

And, despite the fact more gasoline was sold in the United States during 1931 than during any other year in the history of the oil business, the 29 companies listed on the chart showed a net loss during that year of $74,058,162.

Average prices of 36 gravity Mid-Continent crude oil for the years covered by the chart were as follows: 1930, $1.24; 1931, 63 cents; 1932, 88 cents, and 1933, 65 cents.

The combined net earnings of the 29 companies listed on the chart by years, follow: 1929, $496,559,648; 1930, $271,266,046; 1931, deficit of $74,058,162; 1932, $88,078,963; 1933, $111,136,501.



Index to Curves: (1) Amerada Corp.; (2) Atlantic Refining Co.; (3) Barnsdall Corp.; (4) Consolidated Oil Corp.; (5) Continental Oil Co.; (6) Gulf Oil Corp.; (7) Houston Oil Co. of Tex.; (8) Humble Oil & Refining Co.; (9) Imperial Oil Co., Ltd.; (10) Mid-Continent Petroleum Corp.; (11) Ohio Oil Co.; (12) Phillips Petroleum Co.; (13) Plymouth Oil Co.; (14) Pure Oil Co.; (15) Shell Union Oil Corp.; (16) Simms Petroleum Co.; (17) Skelly Oil Co.; (18) Socony-Vacuum Corp.; (19) Southern Penn Oil Co.; (20) Standard Oil Co. (Ind.); (21) Standard Oil Co. of Calif.; (22) Standard Oil Co. (N. J.); (23) Standard Oil Co. of Ohio; (24) Sun Oil Co.; (25) Texas Corporation; (26) Texas Pacific Coal-Oil Co.; (27) Tide Water Associated Oil Co.; (28) Union Oil Co. of Calif.; (29) Warner-Quinlan Co.

Major Companies Turn to Aviation Gasoline as Premium Motor Fuel

By C. O. WILLSON

NEW YORK, Dec. 3.—With the announcement here of a new premium gasoline by the marketing units of the Standard Oil Co. (New Jersey) and similar action earlier in the week by Gulf Refining Co. the retail marketing trade in this territory has a new development which is causing wide discussion. The Standard of New Jersey's new gasoline bears the trade name of Aerotype Esso taking the place of its Esso and the Gulf's new premium gasoline will be known as Gulf No-Nox Ethyl (Aviation Grade).

The Gulf's gasoline is being made available throughout its marketing territory which includes the Southwest, Southeast, East and part of the Middle West. The Standard of New Jersey, through four companies — Colonial Beacon Oil Co., Standard Oil Co. of New Jersey, Standard Oil Co. of Pennsylvania and Standard Oil Co. of Louisiana—markets in 18 states and the District of Columbia, all of which are located east of the Mississippi River except Louisiana and Arkansas.

Aside from the merchandizing plans of these two companies which in the case of the Standard of New Jersey companies is to be backed with a $700,000 advertising and sales campaign over the next few weeks, the introduction of these fuels appears to have general significance to the entire oil industry in this county. It is the first time in two or three years that a major distributing company has seen fit to center its marketing effort in the sale of a premium grade motor fuel. Secondly, if the products receive approval by consumers a new standard in quality motor fuel specifications will no doubt be established which will be adopted in part at least by other large and small distributors which offer premium products.

Return to Premium Fuels

As viewed by some observers, the new fuels may mark the end of one cycle in domestic marketing practices and the start of another. Most readers are familiar with the constantly changing position of premium and the so-called regular grade gasolines as sold throughout this country starting with the end of the World War. Previous to the advent of tetraethyl lead in 1923 to improve the anitknock properties of gasoline, the sale of premium motor fuels usually was based on the higher gravity and lower distillation range of the premium products. Many companies at that time sold a fuel meeting what was known as Navy specifications of 56-58 gravity as a regular grade product and also a premium gasoline which approximated the requirements of the Army and Navy for aviation fuels. The latter also enjoyed a large demand in foreign countries for all uses a situation which continues up to this time. The sale of the premium fuels in this country at that time was largely based on the ease in starting a car and the elimination of reduction in carbon formation.

The introduction of Ethyl Gasoline changed this situation. Antiknock properties in the course of two or three years supplanted volatility as the basis for premium sale. The sale of Ethyl Gasoline was at first restricted to a few companies which in most cases featured the premium fuel and quickly built up a large gallonage. The premium sales of the early licenses ranged from 35 to 60 per cent of their total gallonage. This situation continued for a time even after all but three or four of the major and semimajor companies in this country were selling the Ethyl Gasoline at a premium of 3 cents over their regular grades.

Improve Regular Grades

This relative position between premium and regular grade motor fuels started to change in 1929 and 1930 with a decline in the premium sales. Possibly the main reason for this change lay in the fact that with the Ethyl licenses available to practically all of the larger refiners and distributors they were reduced to a common denominator with the premium gallonage so equally divided that it lost most of its attractiveness as a merchandizing feature to many companies. Another angle was the improvement in the regular grade gasolines through the general use of cracking by practically all refiners and the improvement in processing from the standpoint of refining gasolines of high antiknock value and greater volatility. Individual companies began featuring their regular grade products as being improved to the point where it was not necessary to buy premium gasolines. Most of the companies continued to sell the premium Ethyl Gasoline but sales promotion centered on the regular grades. This development was tied in with the start of the depression in which customers became price conscious and readily accepted the lower priced products. Last year the Ethyl Gasoline Corp. recognized this situation by making tetraethyl lead available for the regular grades. This served to bring further improvement in the regular grades of its licenses so that over the past two years these regular branded products of the larger companies have had octane ratings ranging up to a maximum of 70. The octane rating of the premium fuels also increased but at a much slower pace.

This situation has brought steady decline in the sales of the premium Ethyl Gasoline sold under various trade names. In the Middle West and some other sections, sales have become negligible and it is said that the maximum distribution of any single company is about 10 per cent of its total gallonage. A reduction in the spread in retail prices between the premium and regular grades from 3 to 2 cents last year did not bring about any general change in this relative situation.

Turn in Summer

It is now understood that some companies experienced a turn in this relative situation starting last summer. Without the aid of any special sales effort these companies saw their sales of premium grade gasolines increase. Improved business conditions are offered in explanation for this latest shift in gallonage. In normal times a substantial percentage of car owners are willing to pay premium prices for motor fuels and oils having properties which give superior performance. They want the best and are willing to pay for it. These owners have been in a partial or total eclipse during a period in which it has been "smart to be thrifty," but it is now believed they will return to their former buying practices in steadily increasing numbers. It is said in this connection that many car dealers are contributing to this return to "normalcy" by recommending that their customers, in buying new cars, use the premium grade gasolines to assure maximum performance. This recommendation of the dealers ties in with the changes in car design by the manufacturers which have placed more and more emphasis on improved properties of motor fuels with the end not in sight if rumors concerning some of the 1935 cars shortly to be announced, prove true.

Volatility Stressed

In regard to the new motor fuels of the Gulf and Standard companies it will be noted that in the formal announcements the greatest emphasis is placed on properties other than antiknock characteristics. This gets away from the common denominator situation previously mentioned which certain companies found objectionable in the sale of the first premium Ethyl Gasolines and later with the regular grades when practically all of them also contained Ethyl fluid. This does not detract from the latter as an ingredient of a finished motor fuel. Its position is secure in that it has proved to be an economic method of increasing the antiknock properties of gasolines and also assuring uniformity as to that property in the motor fuels as sold by individual companies. But it is believed that with the advance in antiknock rating of most gasolines it will be necessary to emphasize other properties of superior motor fuels in order to attract customers who are willing to pay premium prices. It is pointed out in this connection that the octane rating of practically all premium motor fuels have been advanced to the point that they give practically "knockless" service in all cars now on the road.

Properties Summarized

The detailed specifications of the new Gulf and Standard fuels were not available at this writing. In the case of the Standard company some advance information has been given out to dealers and customers covering the general characteristics of their new motor fuel and this information is summarized here in order that readers may be familiar with the general claims for the product. In regard to distillation range the Standard offers the following comparison showing the superior properties of the new fuel (temperature and per cent recovered):

Temp. °F.	U. S. Motor per cent	Quality motor fuel per cent	Fighting grade aviation per cent	Aerotype Esso per cent
158	6	20	8	23
212	17	42	48	58
257	33	65	82	83
284	50	76	90	90
356	80	94	*320	*320

*Endpoint.

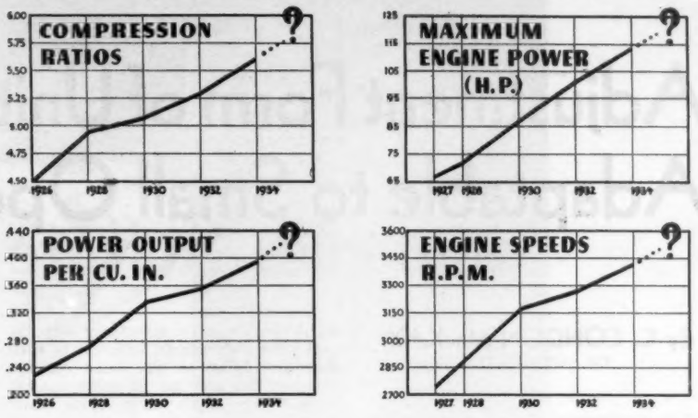
The quality motor fuel referred to approximates in distillation properties most of the branded grades of premium Ethyl gasolines. This comparison as to distillation properties based on above table is shown graphically in the accompanying chart.

The data and chart show that the superior value claimed for the new fuel in regard to volatility is based on its larger percentages of the light and intermediate fractions. Compared to the Fighting Grade Aviation it has much larger percentage of the lightest fractions and surpasses the quality fuels in the intermediate fractions. The importance of this distillation range from the standpoint of car performance is emphasized in the following seven claims made for the new fuel:

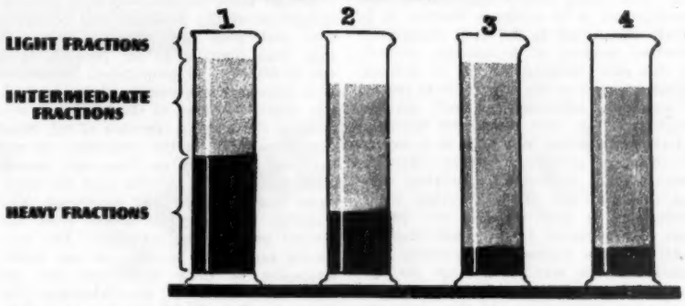
1. It has an octane rating of 78. It gives absolutely knockless performance.
2. Meets the rigid specifications for Fighting Grade Aviation fuel and exceeds them by a wide margin in quick starting.
3. Starts 11 per cent quicker than the old Esso.

(Continued on Page 51)

A Glimpse of What Has Happened in the Automotive Industry


COMPRESSION RATIOS
MAXIMUM ENGINE POWER (H.P.)
POWER OUTPUT PER CU. IN.
ENGINE SPEEDS R.P.M.
1926 1928 1930 1932 1934
1927 1928 1930 1932 1934

Trend in Volatility



Method used by Standard Oil Co. of New Jersey to show trends in automotive design which necessitate better motor fuels and comparison of volatility in motor fuels. (1) U. S. motor gasoline. (2) Quality fuels. (3)-Fighting grade aviation. (4) Aerotype Esso

Adjustment Form of Unit Operation Adaptable to Small Operators

By C. CONDON MacKAY
The Carter Oil Co.

Unit development is now more broadly used than at any time since its inception. This rising tide of approval of unit development is in evidence because it is widely recognized as the only completely effective method of production control, as the only definite means of drilling regulation, and as the only definite means of enforcing adherence to well spacing programs. It is also recognized throughout the engineering fraternity as a means of insuring greater recovery through complete and uniform engineering control and practice. Thus securing more production at less expense, the profit from the operation is increased thereby.

All remarks following concerning difficulties in the straight acreage pooling agreements are not made for the purpose of abusing unitization. On the contrary, it is an effort to improve our manner of forming pooling agreements and thus promote and make unit development even more acceptable.

Some Companies Penalized

A great many of us who have been engaged in the formation of unit operating agreements for the purpose of testing geologic structures have realized the imperfections of the usual pooling agreements wherein the interested parties merge their interests on the basis of amounts of acreage regardless of position of the acreage on the geologic structure. We have realized that those companies having acreage on the best part of the structure are penalized by merging their interests on an equal basis with those holding acreage less desirably located. We have realized that there have been instances of arranging the areas incorporated in pooling agreements with the desire of obtaining greater percentages of ownership in the unit.

Now, in the first place, if a pool is to be successfully operated as a unit with an orderly drilling program, orderly system of well spacing, orderly recovery of production at the oil/gas ratio to obtain maximum recovery, it is obvious that, to insure against interference, the unit block of leases must cover the entire productive area in the pool. It is apparent that if there are producing leases adjoining a unit operation and not incorporated in it, the well spacing, rate of production, and other factors in the unit must be affected and in many cases dictated by the lease owner out of the drilling agreement. It is obvious that those proposing a unit block which does not unquestionably cover a structure are not interested in the true purposes of unit development; they are attempting to get financial assistance or are trying to increase their percentage of ownership in the best located acreage.

The Oil-Water Line

In the second place, the fact that the entire producing area must be covered by the unit block, if the purposes of unit development are to be achieved, necessitates the inclusion of acreage of dubious structural position in the formation of the unit block. It is generally recognized that the position of the oil-water line on a structure cannot be predicted or computed prior to drilling and development. On structures with the same subsea elevations, adjacent to each other and lying on the same regional structural feature, the oil-water contact line will vary. Even on the same structure there are variations in the oil-water contact.

In the third place, in spite of all contributions of the geologist and geophysicist, and none more readily agrees to this than they, it is not possible from our geological and geophysical knowledge of a structure to ascertain, prior to drilling, which portions of the structure will produce the largest amounts of oil. Sand conditions vary on the structure; in one part the sand may be loose and unconsolidated, while in another part the sandstone may be hard and concreted. The reservoir rock may be absent from the central part of the structure. The producing sand may be only on one flank. Examples of these conditions are too numerous to mention; the Oklahoma City Field, the Polo Field, are but two. Subsurface faults may alter the surface conception of the production area. Variations in the porosity of limestones, sand conditions, and other factors make impossible accurate predrilling estimates of productivity.

These considerations all point to the futility of any equitable pooling of leases on an acreage basis. The same considerations also show the futility of weighting the acreage contributions prior to drilling, according to structural position. For example, by weighting is meant giving a lease located on a contour 100 feet below the top of the surface structure one-fourth the value of a lease the same size on the crest of the fold, etc.

Adjustment Provision

The ideal unit operating agreement is one in which each lease owner receives his full share of the oil produced from the particular lease contributed by him while benefiting from the economies and increased recoveries from the development of the pool as a unit. It is fundamentally inequitable that a lease owner receive profit from the inclusion of a tract that is nonproductive. Conversely, it is fundamentally equitable that a lease owner receive his full share of the profit derived from only the acreage which he contributed.

This can be accomplished by the adoption of the following adjustment provision in our pooling agreements:

"It is agreed that the interests as set out on Exhibit A attached hereto are tentative only and that the interests of the parties hereto in and to the property covered hereby and the production therefrom and the proportion in which the parties shall share in the products and proceeds from and contribute to the exploration, development and operating expenses on said acreage shall be tentatively adjusted at the expiration of ..... years from the date hereof by a re-evaluation of the several oil, gas and mineral leases owned by each party hereto and included in the area described in Exhibit A hereto attached, based upon the ultimate productivity of such leases arrived at by a consideration of all evidence thereon then available; provided, it is agreed that in ascertaining the ultimate productivity as herein provided, the determination shall be made upon the basis of the productivity of the oil and/or gas in place under the acreage of each party hereto at the beginning of operations on the unit block. At the end of said ..... year period, each adjusted interest of each party shall be the ratio of the ultimate productivity of the oil, gas and mineral leases (determined as herein provided) owned within said area by such party at the expiration of such period, to the ultimate productivity of all such leases owned on said date within said area by all parties hereto. The parties hereto shall undertake to agree upon such re-evaluation, but in the event they cannot agree upon same they shall undertake to select a committee of three petroleum engineers to make such re-evaluation of such leases, and in the event of full agreement upon the personnel of such committee of engineers it shall proceed to re-evaluate said leases and determine the adjusted interest of each party in the joint properties. In the event the parties cannot agree upon such re-evaluation or upon such committee of engineers the re-evaluation as herein provided shall be made by a committee of three competent engineers selected by the then president of the American Institute of Mining & Metallurgical Engineers and director of the U. S. Bureau of Mines and the president of the American Association of Petroleum Geologists. In the event either of the last named parties should refuse to participate in the selection of said committee of engineers then the director of the U. S. Geological Survey shall act in his place and stead. The division of interests made by said parties or by said committee of engineers (by whichever method appointed) shall be binding upon all parties hereto.

"After the parties hereto or the committee of engineers selected, as herein provided, to make such re-evaluation have completed the work of re-evaluation, adjustment of the interests of the respective parties hereto shall be made in conformity with the agreement of the parties or the report of such committee and all accounts paid to or by the parties hereto shall be adjusted in accordance with said adjusted interests so that if any party has received a greater sum than it is entitled to under such adjusted interest or has paid a larger portion of the expenses or development and operating costs than it should have paid, reimbursement or adjustment shall be made accordingly. Thereafter all payments and receipts shall be based on such adjusted interests until final division of interests is made, as hereinafter provided.

"(As many adjustment periods as desirable may be herein provided for with whatever terms for the periods as is desired).

"In like manner, at the expiration of ..... years from the date hereof the parties hereto, or in the event of their failure to agree, then a committee of three petroleum engineers selected in the manner above provided shall re-evaluate said leases on the basis of the ultimate productivity of the same arrived at by a consideration of all the evidence available at the end of said ..... year period and a final determination of the proportionate interest of each party hereto in said leases and all other joint property shall be determined in the manner above provided and adjustments made between the parties hereto on all previous transactions hereunder on the basis of such final division of interests. The division of interests made by agreement of said parties or by said committee of engi-

Texas Purchasers Base Their Crude Oil Prices on Tank Table Measurement

The Humble Oil & Refining Co. issued a new price bulletin effective 7 a. m. December 1. The prices posted are not changed affecting any given grade and volume of crude oil. The posting differs from the one it replaces only in providing that the prices posted for Texas crude are applicable to oil measured by 99 per cent tank tables, and in specifying that proportionately higher or lower prices are for oil measured in any other way.

This posting is occasioned by the new rule No. 9 of the Texas Railroad Commission made effective December 1, which, except for the revision in such price bulletin regarding rules of measurement applicable to payment for purchased oil, would change the custom that has existed from the beginning of the oil industry by which the seller has stood a part of the loss incurred in handling and shipping crude oil. Several other Texas crude oil purchasing companies already have similar provisions in their price bulletins.

The Humble quotes its prices for oil in all the fields in Texas in which it runs oil, the prices being the same as those which have prevailed since late last September, and follows the price list with a closing paragraph signed by James Anderson, vice president.

The closing statement follows:

"The above prices for crude oil in Texas are based upon the computation of quantities from tank tables showing 1 per cent less than full capacity of tank, with corrections for temperature by allowing or deducting 1 per cent for each 25 degrees below or above 60° F., and with deductions to cover the full per cent of basic sediment, water and other impurities. Such prices for crude oil in New Mexico are based upon the computation of quantities (including all corrections, adjustments and deductions) in accordance with the present existing rules and regulations of the Corporation Commission of New Mexico. If quantities are computed on any other basis, the prices posted herein and to be paid are more or less than the above prices in proportion to the resulting changes in quantities, so that the total amount of money paid for any given volume of crude oil will equal the amount that would be due therefor at the above prices by computing quantities as above provided."

In Oklahoma and Kansas all purchasing companies pay for oil on a 97-percent tank-table basis, and where any other form of tank measurement is demanded the prices are proportionately lower or higher.

It has been the custom since the early days of the oil industry for the seller of crude to allow for basic sediment and water. In the East and in Kansas and Oklahoma the allowance is 3 per cent of the full capacity of the tank. In Texas it had until December 1 been 1 per cent, but the price of oil in the Texas Mid-Continent fields where oil is bought on a gravity basis is 5 cents per barrel lower than in Oklahoma and Kansas for the same grade of oil, so that Kansas and Oklahoma producers cannot feel that they are being subjected to discrimination in the difference in allowance.

CEMENT! PAPER! STONE! OIL!

Belt "case histories" in four industries show how G.T.M. can help you reduce costs

THAT the biggest factor in belting economy is the correct application of belts to drives is proved by the following records of Goodyear belts under vastly different operating conditions.

CASE HISTORY No. 1. New Jersey cement plant. Drive: giant rock crusher, grinding 3- to 10-ton boulders. G.T.M.—Goodyear Technical Man—specified 9-ply Goodyear Transmission Belt in 1922. Still on the job today after 12 years' service without any repairs, save cutting to take up slack.

CASE HISTORY No. 2. St. Louis paper mill. Beater drives, operating 24 hours a day. Belt failures cost 1 to 2 hours delay daily, until G.T.M. specified 16-inch, 8-ply endless Goodyear THOR Belts. Now getting three to four years, continuous service, without breakdowns—*at 50% less belting cost.*

CASE HISTORY No. 3. South Carolina stone plant. Four mean drives—vibrating screen, air compressor, main gyratory crusher and jaw crusher. G.T.M. recommended four Goodyear COMPASS Endless Cord Belts. Results: on vibrating screen—five times longer service than previous belt, saving $142. On others, approximately 100% longer service at 50% less cost per belt.

CASE HISTORY No. 4. Arkansas oil well. Pump drive. Previous belt broke five times in five months. G.T.M. advised double-deck Goodyear COMPASS Cord Endless Belt. Still in operation after 35 months' continuous operation, 24 hours a day, without a single shut-down for belt trouble!

You can enjoy the same money-saving, trouble-free service by having your belts accurately specified to your operations by the G.T.M. To secure his expert services, write Goodyear, Akron, Ohio, or Los Angeles, California—or call the nearest Goodyear Mechanical Rubber Goods Distributor.

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neers (by whichever method appointed) shall be final and binding upon all parties hereto, and all of such parties agree to pay to the other parties any amounts required to effectuate the adjustments in accounts as herein provided for.

"(If parties to agreement desire, final adjustment may be made upon the basis of the actual ultimate production)."

Productivity Valuation

At first thought there may be apprehension over the possibility of agreement as to the correct productivity valuation. This apprehension is ungrounded. Estimates of productivity by competent engineers in our present engineering progress are surprisingly accurate. Millions of dollars are spent in the purchase of oil producing properties on the estimates of ultimate production made by engineers for the purchaser and also for the seller. Certainly there should be no reluctance in relying upon these estimates in pooling agreements. Subject to slight error as these estimates may be, certainly these errors are inconsequential as compared to valuation by acreage basis. Further, as the periods of evaluations progress toward the time when the final valuation is made, any previous errors are rectified and there is increasingly less appreciable error in the final estimate, or none if the re-evaluation is finally concluded with the actual ultimate production. In the Van Pool where the adjustment form of unit operating agreement was first used in the Mid-Continent fields, the Pure Oil Co., the Texas Co., Sun Oil Co., Shell Petroleum Corp. and Humble Oil & Refining Co. did not even find it necessary at the time of the first re-evaluation, two and one-half years after the execution of the agreement, to select disinterested engineers for the re-evaluation.

Apprehension over complicated accounting procedure is unfounded. The accounting procedure is identical with that in use in the prevalent forms of pooling agreements. The accounting adjustment itself is a simple bookkeeping entry.

It is not felt that the possibility of insolvency of a participant under this agreement is a serious drawback since these instances are, in the first place, few, and further, since in the early stages of development, production charges will prevent any great dividends being paid which might be difficult to retrieve from an insolvent, and in the later stages of development the alterations of the interests will be increasingly small.

In opposition to the idea of adjustable interests, there are those who, just because they have expended money in development, feel that they do not want to lessen their interest, even though any surplus expenditure is returned. Is this sound reasoning? Shouldn't the results of the acreage be the measure instead of the money expended? Otherwise, money expenditure is made a basis of interest rather than the value of the leases. No reasonable justification of this attitude can be seen. At one time in the early stages of unitization an attempt was made to pool acreage on the basis of the amount each company had paid for its lease. Is this not along the same absurd line of reasoning as above?

Benefits of This Form

This form of unit operating agreement is not a new idea. It is not perfect. It is infinitely superior to other methods of pooling agreements in use because: (1) Each lease contributor obtains the interest in the profits that production from his contribution entitles him to; (2) all disputes as to inclusion of what appears to be questionable acreage are eliminated; (3) difficulty of getting companies with what appears to be most desirable acreage to merge their interest with questionable acreage is eliminated; (4) difficulty of getting the small operator with limited acreage to pool his holdings is obviated.

The adjustment form of unit operating agreement should be of particular interest to the small operator because it makes unitization acceptable to him. Likewise, major producers are favoring increasingly its general adoption because of its absolute fairness. It is felt that it is just a matter of time until it will supplant other forms of pooling agreements. Basing interests on values should be of particular significance to the geologist since it puts a premium upon the merit of geological work.

Survey of Wholesale and Retail Trade in Oil Products by Census Bureau

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Dec. 3.—A survey of the wholesale and retail trade in the United States for 1933 has been prepared by the Bureau of Census of the U. S. Department of Commerce. Both surveys show a rising trend in employment as well as in sales.

Total pay rolls for all wholesale establishments distributing petroleum products amounted to $351,868,000 including $5,260,000 paid to part-time employes. More people are employed in the wholesaling of petroleum than in any other industry except the distribution of raw farm material and the distribution of groceries and foods.

In the retail study it is brought out that the petroleum industry ranks fourth in employment figures, there being employed by filling stations a total of 163,401 persons.

Petroleum stocks on hand for wholesale distribution at the end of the year amounted to $158,129,000. The wholesale branch of the petroleum industry carried less than the average stocks. Bulk plant stations alone accounted for 15.9 per cent of all wholesale establishments. Besides bulk plants the petroleum industry covered by the wholesale survey is divided into nine other classifications, including agents and brokers, wholesalers proper, sales branches, both with and without stocks, commission merchants, export agents, manufacturers agents and selling agents. This classification of petroleum distributors accounts for 56,841 establishments in which are employed 217,407 full-time employes. This does not include any part-time employes, the number in this class not being included in the findings of the Census Bureau.

The average total expenses for all classes of wholesale petroleum distributors amounted to 11.39 per cent of the net sales, varying from 2.2 per cent for brokers to an average of 19.8 per cent for bulk stations.

Fourth in Value

Petroleum products ranked fourth in value of all commodities in the wholesale market, the sales of these products during the year amounting to $2,288,929,000, or 7.2 per cent of all wholesale transactions. Petroleum products were exceeded in value only by groceries and foods, raw material farm products and farm products for consumption.

The survey was based on different types of business, of which petroleum bulk plants were classified as one type. The figures disclosed that bulk plants, as a whole, were paying for salaries a higher percentage than any other type of wholesale operation. It is shown by the figures that this type of operation is paying in salary an average of 8.1 per cent of the total net sales.

Petroleum Products Exported

Export agents handling petroleum products ranked second in volume during the year, the figure for petroleum being exceeded only by raw farm materials. The amount of petroleum products exported amounted to $31,184,000, which was 23.1 per cent of all exports handled by exporting agents.

While the number of wholesale establishments in the country in 1933 had decreased 3.3 per cent, as compared with 1929, the dollar volume of business was 53.6 per cent less, which means that the average sales per establishment were considerably lower than in 1929. Assemblers and country buyers suffered the greatest percentage decrease, 63 per cent, while bulk stations experienced the smallest decrease, 21.2 per cent. In the latter case, however, there was an actual increase in the number of establishments of 33.5 per cent, while the number of assemblers and country buyers decreased 30 per cent.

It is clearly shown that operating expenses for bulk plants are higher than such expenses for any other wholesale type of business, and also that an increase in such expenses has been noted since 1929. In that year operating expenses amounted to 14.3 per cent of the net sales, while in 1933 they amounted to 19.8 per cent of net sales, an increase of 5.5 per cent in four years.

In nine kinds of business there was an increase in the number of establishments between 1929 and 1933. The largest increase was in the automotive products group which had a 37 per cent increase in wholesale establishments, but in actual numbers the greatest increase was in establishments for the distribution of petroleum and petroleum products. This increase was from 23,007 in 1929 to 28,421 in 1933, a gain of 23.5 per cent. Petroleum distributors numbered 17.3 per cent of the total in 1933 as compared with 13.6 per cent in 1929.

Retail Trade

In contrast with the reduction of pay in general retail trade from $1,312 to $986 filling stations have averaged a reduction of much less, namely from $1,208 in 1929 to $990 in 1933, but at the same time the total pay roll for filling stations is approximately the same as it was four years ago.

The number of filling stations has increased by 49,000 since 1929, bringing the total of all service stations to 170,404. While a noticeable decrease in the price level took place between 1929 and 1933 the sales volume was only 14 per cent less than in 1929. As a result filling station sales constitute 6.12 per cent of total retail sales in comparison with only 3.64 per cent in 1929.

The total pay roll for filling stations

(Continued on Page 29)

INFORMATION REGARDING FILLING STATIONS TAKEN FROM THE FINAL 1933 CENSUS

State—	No. of establishments	Sales	Employes Proprietors	Employes (full time)	Pay roll
Alabama	2,358	$17,515,000	2,275	1,982	$1,557,000
Arizona	809	6,288,000	867	470	563,000
Arkansas	2,143	13,850,000	2,041	1,423	1,246,000
California	11,417	126,714,000	10,342	10,109	12,767,000
Colorado	1,858	15,590,000	1,764	1,535	1,328,000
Connecticut	2,095	23,229,000	1,702	2,049	2,340,000
Delaware	406	5,074,000	308	573	632,000
District of Columbia	381	12,318,000	166	1,532	1,763,000
Florida	3,674	27,924,000	3,614	2,591	2,271,000
Georgia	4,033	28,787,000	3,833	3,324	2,622,000
Idaho	719	5,629,000	751	285	273,000
Illinois	8,635	93,712,000	7,526	8,230	9,906,000
Indiana	5,436	44,969,000	4,757	4,197	4,587,000
Iowa	5,142	45,085,000	4,255	4,059	4,122,000
Kansas	4,189	30,485,000	3,615	3,434	3,383,000
Kentucky	2,148	17,351,000	1,832	1,815	1,670,000
Louisiana	2,095	15,304,000	1,889	1,985	1,666,000
Maine	1,099	9,403,000	1,182	691	752,000
Maryland	1,624	18,921,000	1,513	2,088	2,270,000
Massachusetts	4,376	53,372,000	3,424	4,928	5,795,000
Michigan	7,577	75,363,000	7,134	6,051	7,169,000
Minnesota	4,230	44,024,000	3,537	3,493	4,420,000
Mississippi	1,743	11,572,000	1,708	1,414	1,073,000
Missouri	6,305	47,841,000	5,685	5,285	5,501,000
Montana	596	6,599,000	565	395	465,000
Nebraska	2,639	27,221,000	2,265	2,592	2,444,000
Nevada	153	1,613,000	159	95	131,000
New Hampshire	668	5,439,000	667	391	415,000
New Jersey	4,591	48,340,000	4,130	4,735	5,757,000
New Mexico	728	4,109,000	784	363	343,000
New York	9,908	114,925,000	8,902	9,786	11,269,000
North Carolina	5,658	35,657,000	5,691	3,212	2,819,000
North Dakota	807	7,775,000	745	571	586,000
Ohio	10,464	107,298,000	9,309	9,876	11,408,000
Oklahoma	5,135	30,718,000	5,098	3,464	3,013,000
Oregon	1,876	15,844,000	2,147	981	1,207,000
Pennsylvania	10,051	86,644,000	9,493	9,176	9,206,000
Rhode Island	726	8,344,000	639	835	965,000
South Carolina	2,519	15,329,000	2,520	1,563	1,237,000
South Dakota	1,194	10,741,000	1,098	793	780,000
Tennessee	2,564	21,937,000	2,504	.....	1,954,000
Texas	11,211	71,739,000	9,979	8,957	7,373,000
Utah	767	7,251,000	725	618	582,000
Vermont	479	3,597,000	498	282	289,000
Virginia	3,764	25,002,000	3,745	2,640	2,370,000
Washington	2,887	24,877,000	2,801	1,653	2,084,000
West Virginia	2,028	14,615,000	2,078	1,386	1,450,000
Wisconsin	4,256	42,026,000	3,728	3,408	3,818,000
Wyoming	364	3,764,000	400	264	298,000
Total	170,424	$1,531,724,000	156,451	143,626	$151,938,000

Source: Basic information obtained from U. S. Department of Commerce, Bureau of the Census.

WHOLESALE TRADE IN PETROLEUM AND ITS PRODUCTS FOR THE UNITED STATES: 1933

(All values expressed in thousands of dollars)

	Number of establishments	Net sales	Total expenses Amount	Total expenses % of net sales	Average number of full-time employes	Pay roll Total	Pay roll Part-time	Stocks on hand (end of year)
Agents and Brokers	28,421	2,288,929	....	18.5	108,804	$173,505	$2,630	....
Wholesalers proper	1,949	225,927	$39,866	16.9	10,183	15,628	456	$14,542
Manufacturers' sales Branches with stocks	121	25,200	3,990	15.8	932	1,584	8	2,719
Manufacturers' sales Br'nch's, without stocks	19	55,782	4,438	8.0	1,223	2,379	1	....
Bulk Tank Stations	26,176	1,884,644	372,314	19.8	95,787	152,752	2,141	140,630
Brokers	49	44,388	971	2.2	135	429	11	9
Commission merchants	68	4,597	473	10.3	151	197	9	102
Export agents	6	31,184	455	1.5	70	274	....	....
Manufacturers' agents	7	939	142	15.1	44	74	(*)	41
Selling agents	25	6,222	358	5.8	68	186	4	86

*Less than $500.

Miles

Let's forget gallons for a minute and think about miles

If every refiner ran his crude so as to get the last possible knock-free mile out of every barrel of it he would be better off—and so would the marketer—and the motorist

Dubbscracking does it

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

NEWS FROM FOREIGN LANDS

GREAT BRITAIN

A plant for the production of gasoline and smokeless fuel by the "Cannock" process is to be started immediately in Edinburgh, according to a report from Consul R. D. Longyear, made public by the Commerce Department. Similar plants are to be erected in London, Birmingham, Manchester, Cardiff and Glasgow.

Each of the six plants, it is pointed out, is designed to produce 3,000 Imperial gallons of gasoline per day from 150 tons of coal, together with approximately 1,125 tons of smokeless fuel.

The yield mentioned, the report states, is the average estimated for each of the six plants, but Scottish coal has been found to give a higher yield of gasoline per ton than English coal. Where the latter has averaged 15 gallons per ton, Scottish coal is expected to yield at least 20 gallons. It is reported that the "Cannock" process will provide a new market for Scottish coal to the amount of nearly 100,000 tons a year.

The "Cannock" process, the report points out, is in essence a low temperature carbonization method. A ton of coal "fines" is pulverized and mixed with an equal quantity of industrial creosote. Once the process has been set going, crude oil recovered from the process is used to reduce the purchased creosote to only 3½ per cent. The coal-dust creosote mixture is dried and fed into a rotating cylindrical retort 50 feet long and 5 feet in diameter and which is fired by oil, coal or gas. The temperature of the retort is maintained at 450° C. and the resultant products are smokeless fuel and crude oil, the latter being refined into gasoline.

BRAZIL

Protests by motorists in regard to the use of motor fuel blends containing 10 per cent alcohol have resulted in the retraction of an order at Rio de Janeiro, Brazil, issued last summer which compelled all dealers to sell the blended product. It is reported that the alcohol blend does not give satisfactory service in many cars and the protests resulted. The alcohol used was anhydrous alcohol manufactured from sugar. The plan was conceived in order to give profitable outlets for the sugar industry.

In the future the alcohol will be used primarily in government service. It will also be available to service stations at prices which are slightly below those charged for the 100 per cent petroleum product.

MEXICO

Reports from Mexico indicate that the new government sponsored company—Compania de Petroleos de Mexico, S.A. (Petromex)—will be in a position to start operations about the first of the year. The first operations will be confined to drilling but plans call for the construction and operation of a refinery with marketing facilities during 1935.

The organization of the company has been completed and some of the officers chosen. The capital stock will be 22,000,000 pesos (approximately $6,000,000) which will be divided three ways. The government will control 10,000,000 pesos which represents the value of oil lands and concessions which it is turning over to the company. Another 10,000,000 pesos is being subscribed by citizens of Mexico and this will be the working capital. The National Railways will hold 2,000,000 pesos.

Primo Villa Mchel who is minister of national economy and who is familiar with the Mexican oil operations has been elected chairman of the board of directors of the Petromex. He will represent the government interest. In this connection it is said that the new administration in Mexico is especially interested in the success of the entire project. The plan as originally conceived about a year ago will enable the government controlled company to furnish a large part of the refinery products for domestic consumption at prices that are lower than those of private companies. It is also contended that the revenues of the government through the exploitation of its own oil lands will increase.

Mariano Cabrera, a well known figure in the administration of the National Railways of which he is executive vice president, has been elected vice president of the Petromex. Trinidad Paredes, who has been directly connected with petroleum operations in Mexico as director of the administrative control, has been elected secretary and Juan R. Platt, treasurer of the National Railways, has been selected as treasurer of the company. The active management of the company will be announced before the end of the year.

ARGENTINA

The Compania Nacional de Petroleos (Standard Oil Co. of New Jersey) has let a contract to the Lummus Co., New York, for the construction of a two-stage atmospheric and vacuum distillation unit at its Campana, Argentina, refinery. The new unit which will have a capacity of 6,500 bbls. daily will replace distillation equipment which was destroyed by fire last August. Work on construction of the new unit will start immediately.

Other improvements replacing in part equipment destroyed by fire, are to be made at the refinery. These will be made under the direction of the plant management. The refinery's cracking equipment was not seriously damaged by the fire.

NEW ZEALAND

The Socony-Vacuum Oil Co., Inc., is reported to have notified the Taranaki (N.Z.) Oil Fields, N.L., that it will not drill certain areas on the east side of the North Island. This area was the subject of an agreement between the two companies and under the direction of the Socony-Vacuum considerable geological work was done over a two-year period. The reports of these investigations will be turned over to the Taranaki Oil Fields, which owns large oil rights on both the North and South Islands. The company's headquarters are located at Melbourne, Victoria, Australia.

GERMANY

The German government has under consideration a plan which will require that all lubricating oils in that country be reclaimed for further use. Investigations have been conducted and it is estimated that approximately 200,000 bbls. of oils will be reclaimed this year.

The investigations have shown that from 85 to 90 per cent of the oils can be reclaimed. In some cases the oils after reclaiming are not suitable for the same uses as the original oil. In these cases they can be blended with fresh oils and used for some other lubricating purpose. Germany is a large importer of lubricating oils and the government's attitude is based on the desire to reduce imports as much as possible to maintain a better balance of trade. The reclaimed oils are of course exempt from import taxes.

Similar action has been taken in the U.S.S.R. under government supervision. In that country portable units for reclaiming the oil have been perfected and these are being used at many points where it is not practicable to ship the used oils to larger reclaiming plants.

SWEDEN

The retail price of gasoline was advanced recently in Sweden due to the action of the government in compelling all distributors to buy alcohol from the government alcohol monopoly for the purpose of blending it with gasoline refined from petroleum. At present the motor fuel sold in Sweden contains 3.6 per cent alcohol. The price of alcohol exceeds that of gasoline and due to this fact the government permitted the motor fuel retailers to advance their prices to take care of the increased cost of production.

CZECHOSLOVAKIA

A movement to bring about direct importation of American mineral oils into Czechoslovakia rather than by way of German ports has been initiated in that country, according to a report to the Commerce Department by Commercial Attache Sam E. Woods, Prague.

The Czechoslovak Wholesalers in Mineral Oils, he points out, is urging its members to take action toward this end which is in line with the tendency of the government to reduce to as large an extent as possible indirect imports of American merchandise.

There are various reasons for this attitude on the part of Czechoslovak government authorities and importers, Commercial Attache Woods points out. The chief of these is the fact that indirect American exports to Czechoslovakia result in an apparent enormous favorable trade balance in favor of that country, when in reality the American-Czechoslovak trade balance is adverse to Czechoslovakia. Another reason is the Czechoslovak-German clearing difficulties, and last but not least, the tendency of the Czechoslovak authorities to build up direct trade relations only, mainly with the United States.

The following table gives values and production taxes for November (calculated in silver at exchange of 3.6):

VALUES

Fuel oil	27.40 silver pesos per cubic meter	= $1.21	per bbl.
Gasoline	86.83 silver pesos per cubic meter	= .0913	per gal.
Kerosene	50.21 silver pesos per cubic meter	= .0528	per gal.

PRODUCTION TAXES

	Tax in cubic meter	Tax in U. S. currency
Crude (sp. gr. 0.93 = Be. 20.38)	3.223 pesos	$0.14233 per bbl.
Crude (sp. gr. 0.96 = Be. 15.68) or heavier	1.959 pesos	.08651 per bbl.
Fuel oil (sp. gr. 0.95 = Be. 17.21)	3.014 pesos	.13310 per bbl.
Gasoline (crude)	3.473 pesos	.00365 per gal.
Gasoline (refined)	1.737 pesos	.00183 per gal.
Kerosene (crude)	3.013 pesos	.00317 per gal.
Kerosene (refined)	1.506 pesos	.00158 per gal.

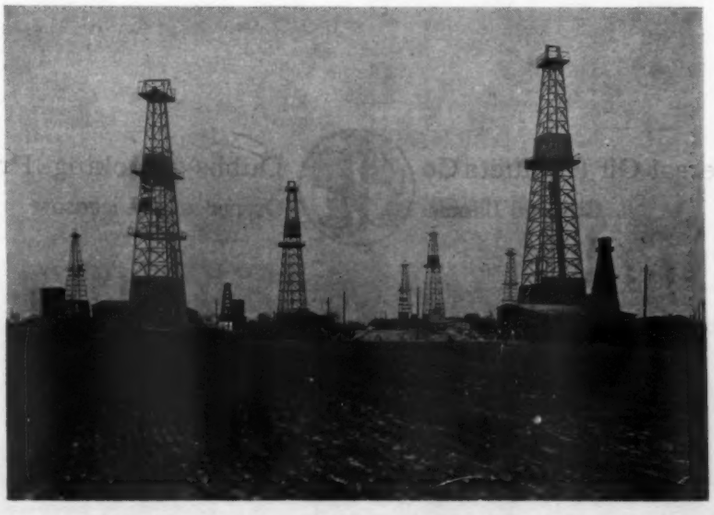
The production tax on fuel oil will vary approximately .01091 per barrel for each degree of specific gravity above (deduct) or below (add) 0.95 specific gravity.

The production tax on light crude will vary approximately .01167 per barrel for each degree of specific gravity above (deduct) or below (add) 0.93 specific gravity.

EXPORT TAXES

	U. S. currency ($1 for 3 pesos)
Crude (sp. gr. 0.93 = Be. 20.38)	$0.07949 per bbl.
Crude (sp. gr. 0.96 = Be. 15.68) or heavier	.04928 per bbl.
Fuel oil (sp. gr. 0.95 = Be. 17.21)	.05962 per bbl.
Gasoline (crude)	.00472 per gal.
Gasoline (refined)	.00189 per gal.
Kerosene (crude)	.00151 per gal.
Kerosene (refined)	.00057 per gal.

Note—As export taxes are payable in silver at par, to make calculations in U. S. currency, take figures given above, multiply them by 3 and divide by rate of exchange at time of payment.

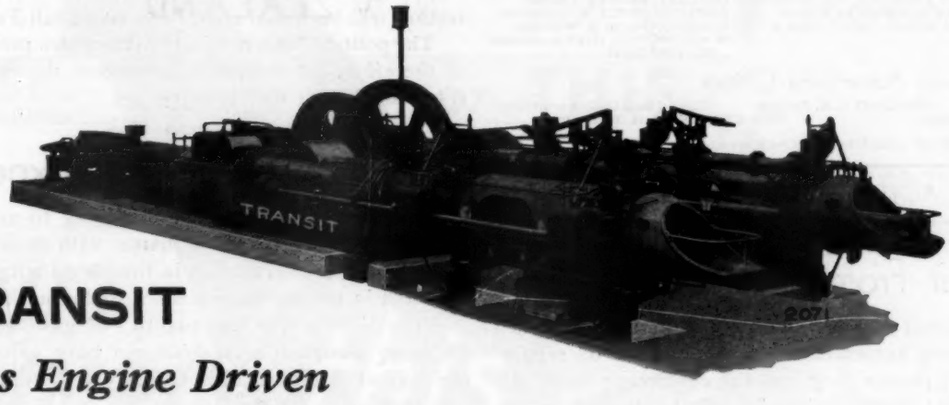


View of the northern field of Nienhagen Field in Germany. In the right foreground is the "Krug von Nidda 10" well with a daily production of 1,400 bbls. Depths of these wells range from 3,900 to 4,250 feet

TRANSIT helps refiners to reduce costs

BY enabling them to reduce the cost of power; and at the same time guaranteeing them the utmost in dependable pump performance for the most exacting of services—that of

PUMPING HOT OIL



TRANSIT

Gas Engine Driven

HOT OIL PUMPS

"IT DOES SEEM TO ME that very few refiners will install steam driven pumps to operate a Cracking Plant, when the Cracking Plant itself provides gas which can be used for opening gas engine driven pumps at much less cost than by using steam." So says Mr. L. D. Fulton, Superintendent of The Pennzoil Company, one of the largest refining companies in Pennsylvania.

The illustration shows the TRANSIT Gas Engine Driven Hot Oil Pump at the refinery of The Pennzoil Company, Oil City, Pennsylvania. The Gas Engine is a TRANSIT 17x24″ Twin tandem, four-cycle, single acting engine operating on refinery gas. It is rated at 310 H.P.

The engine is direct connected through backgearing to a TRANSIT 5x24″ Horizontal Duplex Plunger Hot Oil Pump with forged steel fluid cylinders and extra deep stuffing boxes.

The pump has a capacity of 350 GPM of hot oil at its normal rating of 45½ RPM. It is equipped with 3⅝″ diameter fluid valves and designed to operate on 600° F. oil.

NATIONAL TRANSIT PUMP AND MACHINE CO.

OIL CITY, PENNSYLVANIA

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Not Far From Agreement

It was not to be expected that the interstate conference at Ponca City would produce instant agreement on a program for oil regulation. The chief value of the meeting was the conference itself, the interchange of views and the consideration of the factors in the problem.

Differences of opinion were to be looked for, as varied as the motives behind them. Such differences of opinion exist and persist within the industry itself, originating in individual habit of thought, in standpoint and in relationship within the oil business.

Naturally these differences are multiplied by local and geographical considerations when representatives of the oil producing states enter a conference. But the fact that they recognized the common need for taking counsel was the first step towards action.

Governor-Elect Marland is to be complimented upon calling the conference and the executives of the other States represented for recognizing the necessity for the exchange of views.

It was tactful not to present a cut and dried program, rather leaving it to be evolved out of mutual discussion, because, if a program cannot be evolved in that way there can be no hope of forcing a program upon the States.

The divergence of opinions expressed during the conference was more on the surface than fundamental. They represented attitudes rather than settled convictions. When sifted down and subjected to analysis the views of the various representatives were not far apart except in phraseology.

Opposition to Federal control was overwhelming. Texas and Kansas were more in accord than the words of their spokesmen appeared. The emphasis laid upon the need for continuing Federal supervision of interstate traffic indicated a clear perception of the distinction between turning the industry over to Federal control and accepting the assistance of Federal authority in interstate matters. The agreement upon the need for Federal aid in curbing imports was another point in common.

In fact, in view of the facts brought out at the conference there should be no reason why the governors should not evolve an agreement before the next meeting.

What needs to be done is plain to all. Some approach to uniformity in the regulatory methods of the States is essential if all are to be placed on an equal footing. Any agreement to be effective must avoid any mental reservations that can be twisted into special advantage for any State. Everything must be fair and aboveboard and signed with complete loyalty to the common cause.

It may be said that this is too idealistic to be practical but it is the really practical view because anything short of that will prove unworkable. A compact entered into merely as a cloak for cheating is bound to fail. A compact that will have to be enforced will breed destructive dissension.

For that reason it is better that no impulsive and premature decision was reached at Ponca City. This thing requires thinking over a great deal. The representatives of the States will have to consult their own people. The governors will have to sound out the legislators who must test public opinion.

But if the Ponca City conference sufficiently impresses the governors, the legislatures and the people of the oil producing States, definite action need not be long delayed. The necessity for action is generally understood. The principal points in the necessary program are just as clear.

The States acting unitedly can solve the problem. If they fail to come together that demonstration of incapacity of State administration will be seized upon to promote full Federal control.

The political leaders of any State which prevents a successful issue of the effort for co-operation between the States will have a heavy responsibility for the consequences.

A Courageous Experiment

Many in the industry are beginning to ask if East Texas overproduction is all that is the matter with the oil business. If it was, they think recent reduction in the illegal output ought to have been reflected in greater stabilization of the market.

They believe that the quantity of gasoline available from "hot" oil, large though it was, could not have so completely demoralized the market if there had not been other weaknesses in the marketing situation to fan the fire.

The complexities of the marketing situation have embroiled the Petroleum Administration and the Planning and Coordination Committee for more than a year without nearing a solution.

The fact is that the chaotic condition in marketing is due to the mania for gallonage which insists upon the impossible notion of each holding what gallonage he has and grabbing gallonage from somebody else by underselling him even below cost.

This notion carried to its logical conclusion must mean that the stronger competitor must drive the weaker out of business but just as soon as the victor returns to profitable prices new competitors appear and the vicious cycle is begun anew. Thus the industry is kept in a continual turmoil, frittering away both its chance for legitimate profit and its resources.

It would seem that the folly of this experience had been demonstrated often enough to set the industry to thinking soberly of some more sensible way of doing business.

The action of the Continental Oil Company in establishing a state wide gasoline price schedule for Oklahoma offers an opportunity for saner marketing. It at once removes the familiar pretext for local price cutting that it is being done some other place. Loyally supported by other companies it may be an example for wider acceptance.

Equal determination in maintaining living prices to the determination shown in meeting every local price cutter might prove more stabilizing than setting fire to the house to get rid of the rats.

The price cutter has exerted an influence altogether out of proportion to his actual volume of business only because his larger competitors did not have the courage to stand by their guns.

Marketing has got into the shape it is largely because it made gallonage its objective instead of profits. The situation cannot be improved until marketing management abandons exploded or imaginary theories and comes down to the bare facts of practical reality.

Not THIS
(Belled)
or THIS
(Punched)
or THIS
(Beveled)
or THIS
(Threaded)
BUT SIMPLY this
PLAIN END PIPE
REGARDLESS of the pipe material, Dresser Couplings reduce the pipe cost by eliminating special preparation of the ends; simply specify PLAIN-END PIPE FOR DRESSER COUPLINGS. In making a Dresser joint, the plain ends of the pipe are easily shoved up to the center stop in the middle ring, after which the gaskets are tightly compressed against the pipe and coupling by pulling up on the bolts. The only tool necessary—a ratchet wrench for the bolts. A coupling for plain-end pipe permits using random lengths cut in the field and oftentimes salvaging what would otherwise be wasted. Dresser Couplings permit bends and provide flexibility without in any way changing either the plain-end pipe or the coupling.
S. R. DRESSER MANUFACTURING COMPANY
Bradford, Pa.
With
DRESSER COUPLINGS

Stagnant Spot Market Compels Gasoline to Yield First Place to Other Products in Group 3 Area

By T. F. SMILEY

Gasoline, usually stalking about the center of the market stage, limped to an inconspicuous place in the rear this week. Spot business in the Oklahoma (Group 3) area had shrunk to such small volume that it scarcely was visible to the naked eye. Movement on contract was seasonal, recording a marked falling off from the abnormally high levels reached in recent weeks. In contrast with the inactive market in motor fuels, there was lively trading in natural gasoline, zero burning oil and gas oils.

Continued absence of East Texas as an active participant in the spot gasoline market had the effect of still further invigorating natural gasoline. Most of the grades displayed an even stronger tone than last week and several prices were marked up. The peak season for this material already has been extended a month or so beyond its ordinary period and there was no sign of recession.

Unusual Price Spread

With the 26-70 quoted at 3⅜ cents in Oklahoma, the same grade in North Texas was quoted at 3 cents. This extraordinary spread between the Texas and Oklahoma prices is accounted for by unusual market conditions. At the present time refineries in Oklahoma and southern Kansas are absorbing all but about 2 per cent of the natural gasoline produced in the former State. When the Oklahoma manufacturer is able thus to dispose of his product by what is virtually local shipment the price differential represents what it would cost to transport the Texas material to Oklahoma and southern Kansas refineries.

Although the quotations for 18-pound material are slightly out of line with those for 26-pound (18-pound ordinarily commanding 20 per cent more than the other), there was reported to be a fairly substantial demand for the lower vapor pressure. The more nearly stabilized natural gasoline is, the more it is influenced by conditions shaping the straightrun market. As the refinery gasoline market at this juncture is unsettled, the 18-pound natural is less able to command the price which normal conditions would fix for it. However, manufacturers are making it a point to keep in stock enough of the 18-pound grade to supply the demand.

The demand for 14-pound material, essentially a summer cut, has dwindled almost to the vanishing point, only an occasional car finding a purchaser, so the prices quoted now are little more than nominal. The 18-pound represents the bottom for blending purposes at this season and manufacturers drop from that grade to 12-pound, which is sold as a straight motor fuel.

Weather and East Texas Factors

Both the changed scene in East Texas and the weather have operated to stimulate the demand for furnace oils and gas oils.

In the case of the gas oils the virtual closing up of East Texas has sharply curtailed the immense output which formerly issued from that area for cracking and for domestic consumption. The result is that there has developed something resembling a scarcity where formerly there were surplus stocks. The colder weather has contributed to the better tone of the gas oils too, for this product is used in the manufacture of artificial gas, for which of course there is heavier demand as winter advances.

The weather has been the main factor in the brisker demand for furnace oils, and this combined with the restricted output from East Texas refineries added an eighth-cent to current quotations.

Spot Gasoline Business Shrivels

Brokers say they have not handled a gallon of East Texas gasoline since the Federal Tender Board began its sittings October 25, putting a sudden end to interstate shipments of this product made from illegal crude. In the meantime many gasoline contracts have been closed between jobbers and major refiners who reduced prices below the profit point in the scramble for gallonage. So long as these contracts continue to be advantageous to the jobbers they will be kept in operation. But if the spot market should begin to look attractive and the contracts onerous, it is asserted by many that ways will be found to nullify them, after which brokers will experience a return of their former business.

Such business in gasoline as brokers are handling is provided by refineries in Oklahoma, North Texas, West Texas and Louisiana, but the volume is small, most of the movement being on contract.

An eighth was lopped off bright stocks last Saturday. The position of this material was said to be satisfactory in the Group 3 district, but the cut was necessitated by the weakening of the eastern market. Cylinder stocks and neutrals were steady. Kerosene, which has been sluggish, showed a slightly better tone. Wax was softer and off an eighth.

Refined Oil Market Barometer

Continuation of retail price wars, doubt concerning the efficiency of the marketing agreement submitted to the Petroleum Administrative Board by major companies, and other uncertainties which still overhang the industry combine to prevent the gasoline market from advancing to a more profitable level. Seasonal influences imparting strength to burning oils. Natural gasoline and gas oil still benefiting from sharply reduced refinery operations in East Texas. Signs point to resumption of activity in East Texas, with elimination of hot crude hoped for.

Mid-Continent.—Gasoline quotations slightly up, but spot business at low ebb. Zero burning oils, natural gasoline and gas oils stronger. Wax softening.

East Coast.—Furnace oils, gas oils and industrial fuels strong. Kerosene scarce. Gasoline unsteady.

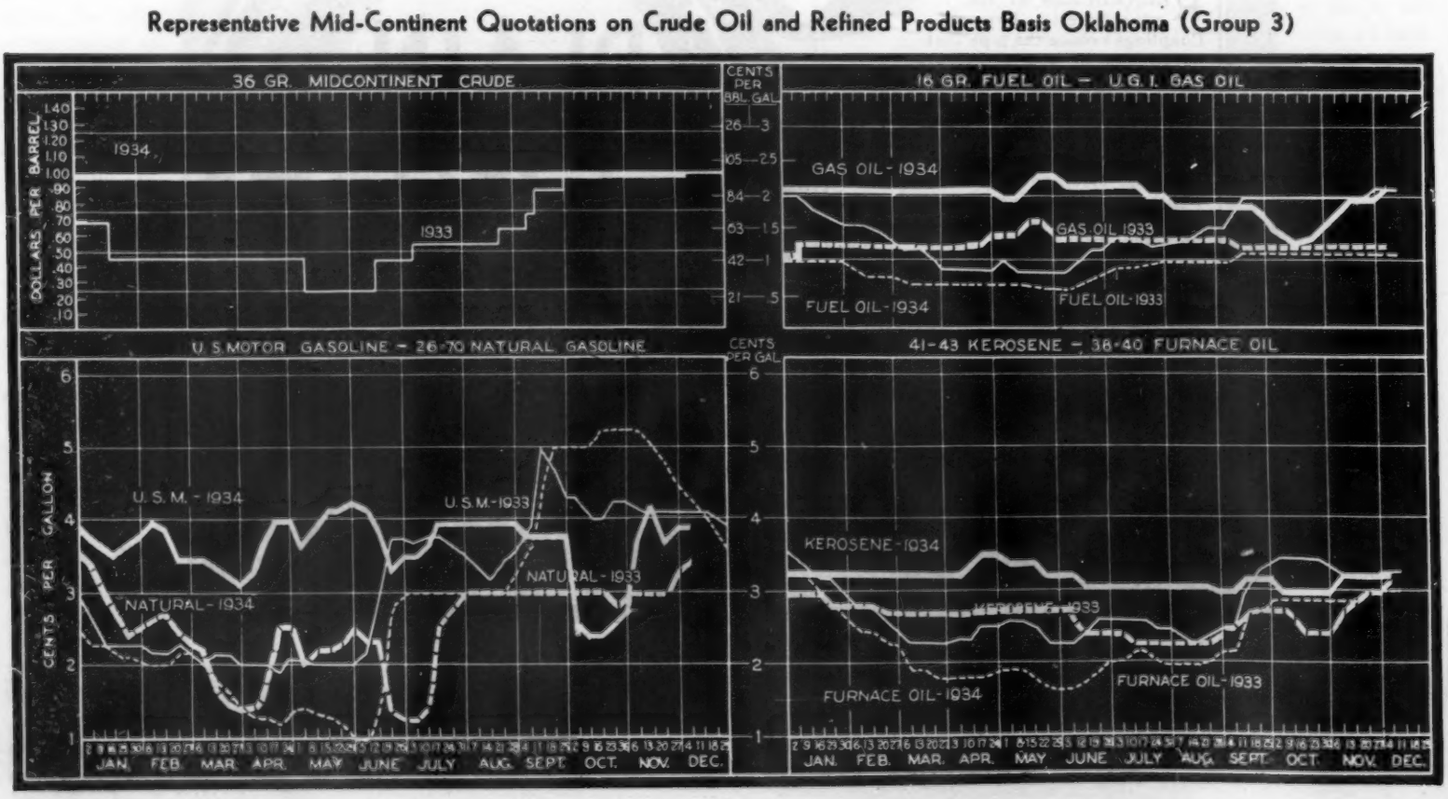
Gulf Coast.—Slightly firmer tone in East Texas gasoline not reflected on Coast. Lubricants steady. Kerosene for interstate movement firm. Fuels slightly tighter.

Pennsylvania.—Market generally dull. Seasonal influences raise neutrals, lower bright stocks.

California.—Market sensitive, prices unchanged. Gasoline weakened by material going out back door as unbranded.

Chicago.—Gasoline firmer, slightly better demand. Heating oils more active and strong.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER BBL. GAL
1934
1933
18 GR. FUEL OIL – U.G.I. GAS OIL
GAS OIL - 1934
GAS OIL 1933
FUEL OIL - 1934
FUEL OIL - 1933
U.S. MOTOR GASOLINE – 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1934
U.S.M - 1933
NATURAL - 1934
NATURAL - 1933
41-43 KEROSENE – 38-40 FURNACE OIL
CENTS PER GAL
KEROSENE - 1934
KEROSENE - 1933
FURNACE OIL - 1934
FURNACE OIL - 1933
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Industrial Fuel Oils, Gas, Furnace and Diesel Oils Follow Eastern Advance in Kerosene Prices

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Dec. 3.—Industrial fuel oils, gas oils, furnace oils and Diesel fuels for shore delivery were generally advanced in the New York market over the past week. The price increases in these products followed the lead of kerosene last week which was established at a low of 5½ cents based on the quotations of the major suppliers.

The advances in industrial fuels and other products mentioned in most cases were one-fourth cent per gallon. Representative tank car quotations in the New York harbor area today were: Industrial fuel oils, 4¼ cents; Diesel fuel oil for shore delivery, gas oil and distillate fuel oils, 4¾ cents; No. 1 furnace oil, 5½ cents, and Nos. 2, 3 and 4 furnace oils 4¾ cents. In the case of furnace oils the quotations were one-fourth cent less to barges. There was very little price shading in these refinery quotations although in New Jersey and some other points small distributors are reported to be offering concessions in tank wagon deliveries. In metropolitan New York and Westchester County prices on tank wagon deliveries of furnace oils to consumers were advanced one-half cent the latter part of last week. These prices are now 8½ cents for No. 1 oil, 7 cents for No. 2 and 6½ cents for No. 4. This one-half cent advance offsets the decline of a similar amount last summer and establishes schedules in line with the tank car quotations.

The No. 5 fuel is unchanged at $1.35 per barrel and No. 6 (Bunker) at $1.15. The marine price of $1.89 for Diesel fuel has also not been changed and those in touch with these markets do not anticipate increases in the immediate future.

Kerosene Scarce

Price changes for the week in other products were of minor importance. Buyers who have failed to cover their December and January requirements are finding kerosene scarce at the higher quotations. While the open market business on kerosene for export movement continues slow reports indicate that the movement on contracts has been heavy in recent weeks. This movement is largely confined to the regular foreign customers of major companies, the kerosene in many cases going to subsidiary units in Europe. As showing the difference between the gasoline and kerosene market situation the case is cited in which a major company has greatly reduced the export movement of gasoline from refineries in this country but continues to supply the bulk of its kerosene requirements from domestic plants. This company is able to refine suitable gasoline from crudes in South America at plants located there and in Europe but these same crudes are not suitable for the best grades of kerosene. Kerosenes refined from American crudes in the United States have always enjoyed a high rating among foreign consumers and so the decline in these foreign purchases have been much less than in the case of gasoline and some of the other refinery products.

The higher kerosene prices at Atlantic Seaboard points which are now on a parity with middle octane kerosene no doubt will result in an increased yield of the product at refineries. These yields can be increased in some instances by taking part of the cut now going to furnace oils on the heavy end or gasoline or naphtha on the light end of crude distillation. It is pointed out in this connection that some refiners who sell a low endpoint gasoline for winter motor fuel are often able for this reason to increase their output of kerosene.

Submit Marketing Agreement

About the only development of the week in the gasoline market was the announcement last week that a group of major companies had come to an agreement in regard to certain marketing practices and these have been submitted to the Washington administration for approval before being made effective. Most of the important features of the major companies' agreement were explained in the November 22 issue of The Oil and Gas Journal. Under the plan, if approved, all discounts will be dropped and contracts now effective covering motor sales and purchase will be cancelled by May 5. In a few cases it is assumed that the contracts cannot be legally cancelled and they presumably will continue in force for the life of the agreements. In new contracts there will be maximum prices. The agreement seeks to fix the responsibility for maintaining prices by requiring adherences to posted schedules which must be established longer than 24 hours. Before making changes in posted schedules other parties to the agreement must be notified.

To prevent price cutting by dealers, companies distributing branded products are required to see that the jobbers and distributors conform to the provisions of the agreement in the same manner as when the products are sold through company owned or controlled stations. Parties to the agreement are required within 30 days to inform each other in regard to terms of contracts with jobbers and distributors. It is understood that the proposed agreements set up an organization to hear and pass on complaints. The states affected by the agreement are Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and the District of Columbia.

Trade opinion in this territory does not appear optimistic as to the probable accomplishments of this agreement among major companies. It is the result of meetings held here last month, some of which were attended by independent distributors in this territory. The immediate aim was to end the unsatisfactory gasoline tank wagon and service station markets existing at many points in this territory with the hope that some permanent plan of operation could be agreed upon which would end many marketing practices that have been associated with unprofitable operations in the past.

Differential Question Unsettled

In regard to the agreement it is pointed out that it has not received the approval of the petroleum administration at Washington. The fact that the agreement does not attempt to settle the much discussed question of differentials between the service station prices of the major companies and independent jobbing interests is also emphasized. To many this appears to be the most important problem which must be settled before there can be any permanent agreement in regard to the details of marketing practices.

So far as known the major companies and the independent units have not changed their relative positions in regard to these differentials. The independent jobbers in most cases have contended that they should be allowed to sell 1½ cents per gallon under the regular branded grades of the majors. The latter have said that they will not consent to such a wide spread which was effective at many points in this territory previous to the collapse in prices which started in late October. It is said that some majors will agree to differential of 1 cent, other one-half cent and still others who feel that the matter of differentials is a phase of price control and has no proper place in a code devoted to marketing practices.

So far as known the parties concerned are no closer to an agreement as to this feature than they were when the discussions started last month. It is said that government representatives for the most part have been favorable to the position of the independents in this matter. In the meantime regular grade gasoline continues to sell from 9 to 13 cents per gallon, including taxes, at many important consuming centers in New Jersey, New York and New England. Where the refiners are giving their jobbers or dealers partial protection in these price wars the net back at their coastal refiners or terminals ranges from 1 to 3 cents per gallon.

The open market posted tank car prices for the various grades of gasoline in New York harbor and New England points are unchanged from last week. At New York the middle octane material is quoted at 5½ cents exclusive of taxes, 5¾ cents for 65 octane and above and 6 cents for regular branded grades of the major companies containing ethyl fluid. A limited amount of low octane material is available at 5 cents.

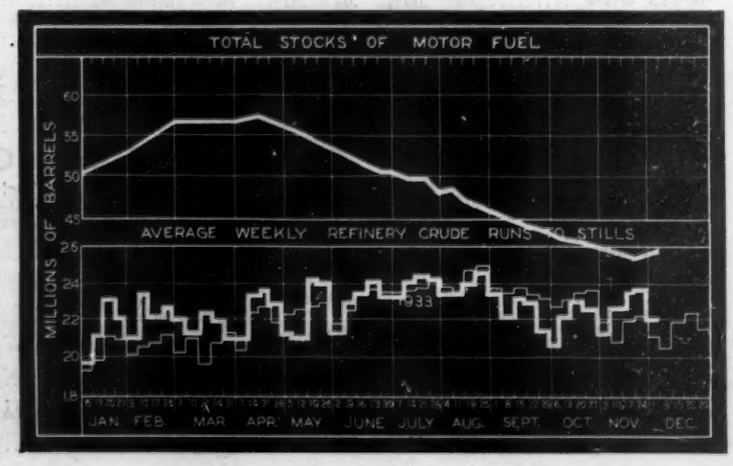
In the export end, quotations at the Gulf are one-eighth cent higher than last week. Kerosene export prices at the Gulf also are fractionally higher with material scarce.

Among the lubricants, 200-3 color neutrals and 150 neutrals are half a cent higher. These paraffin base neutrals are scarce with a steady demand. One company also advanced its price on 600 steam refined stock but at the same time reduced its quotations on Pennsylvania bright stock one-half cent. The export and domestic demand for bright stocks continues slow. Trading in refined wax is slow and lower prices are predicted.

American Petroleum Institute Weekly Refinery Statistics

Week Ending December 1, 1934

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	467,000	11,848,000	14,715,000
Appalachian	93.3	93,000	1,694,000	1,669,000
Indiana, Illinois, Kentucky	94.6	312,000	6,446,000	5,607,000
Oklahoma, Kansas, Missouri	83.7	215,000	3,654,000	3,927,000
Inland Texas	47.6	89,000	1,075,000	1,715,000
Texas Gulf	97.5	483,000	4,155,000	11,308,000
Louisiana Gulf	96.4	112,000	1,104,000	4,375,000
North Louisiana and Arkansas	83.7	41,000	209,000	547,000
Rocky Mountain	66.7	38,000	498,000	647,000
California	96.9	364,000	10,148,000	69,469,000
Total United States	89.7	2,214,000	40,831,000	113,979,000



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

	Dec. 4		Nov. 27	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 63 octane	.037/8	.041/8	.037/8	.04
63-70 octane	.045/8	.041/8	.045/8	.047/8
60-62 400 grades:				
Below 63 octane	.04	.041/8	.037/8	.04
63-70 octane	.045/8	.041/8	.045/8	.047/8
64-66 375	.04	.041/4	.037/8	.04
68-70 360	.041/4	.043/8	.04	.043/8
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.037/8	.041/8	.033/4	.04
63-70 octane	.045/8	.041/8	.045/8	.047/8
60-62 400	.04	.041/8	.033/4	.04
64-66 375	.04	.041/4	.037/8	.04
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.041/4	.041/2	.041/4	.041/2
63-70 octane	.05	.051/4	.05	.051/4
60-62 400	.041/4	.041/2	.041/4	.041/2
68-70 360	.05	.051/4	.05	.051/4
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.041/4	.041/2	.041/4	.041/2
63-70 octane	.05	.051/4	.05	.051/4
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.041/8	.041/4	.037/8	.04
63-70 octane	.043/4	.051/4	.045/8	.05
60-62 400	.041/8	.041/4	.037/8	.04
64-66 375	.041/4	.043/8	.04	.041/4
68-70 360	.043/8	.041/2	.041/4	.041/2
Aviation fighting grade	.05	.051/8	.047/8	.05
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.047/8	.05	.05	.051/4
60-64.9 octane	.06	.061/4	.06	.061/4
65-70 octane	.063/8	.07	.063/8	.07
68-70 350	.061/8	.061/4	.061/8	.061/4
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.051/4		.051/4	
Baltimore	.051/4		.051/4	
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	.051/2		.051/4	
Philadelphia	.051/2		.051/2	.053/4
Boston	.051/2		.053/4	
Baltimore	.051/2		.051/2	
Charleston, S. C.	.051/2		.051/2	
U. S. Motor, 65 and above:				
*New York	.053/4		.053/4	
Philadelphia	.053/4		.053/4	
Boston	.053/4	.06	.053/4	.06
Baltimore	.053/4		.053/4	
Charleston, S. C.	.053/4		.053/4	

*All grades of gasoline one-fourth cent less for small barge shipments.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.043/4	.05	.043/4	.05
60-64.9 octane	.05	.051/4	.05	.051/4
65 octane and higher	.051/4		.051/4	

Naphthas

	Dec. 4		Nov. 27	
PENNSYLVANIA (inland refineries)—				
50-52 (blending)	.043/4		.043/4	
52-54 450 (blending)	.043/4		.043/4	
54-56 450 (blending)	.043/4		.043/4	
50-52 450 (blending)	.043/4		.043/4	
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.04	.041/4	.04	.041/4
Cleaners' naphtha, 56-58 gr., 200 i.b.p.320 e.p.	.063/4	.07	.063/4	.07
Lacquer diluent, 180 i.b.p.-250 e.p.	.073/4	.08	.073/4	.08
Lacquer diluent, 140 i.b.p.-200 e.p.	.083/4	.09	.083/4	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.063/4	.07	.063/4	.07
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.061/4	.061/2	.061/4	.061/2
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.061/4	.061/2	.061/4	.061/2
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.063/4	.07	.063/4	.07
Petroleum spirits	.053/4	.06	.053/4	.06

Natural Gasolines

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
Grade 26-70	.033/8		.033/4	
Grade 18-55	.037/8	.04	.037/8	.04
Low vapor pressure grades:				
14 lb. v.p. (max.)	.041/4	.043/8	.041/4	.043/8
12 lb. v.p. (max.)	.045/8	.043/4	.041/2	.045/8
NORTH TEXAS—				
Grade 26-70	.03	.033/4	.03	.031/4
Grade 18-55	.035/8	.037/8	.035/8	.037/8
Low vapor pressure grades:				
14 lb. v.p. (max.)	.04	.041/4	.04	.041/4
12 lb. v.p. (max.)	.041/2	.045/8	.041/4	.041/2
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.035/8		.035/8	
CALIFORNIA—				
75-85 375	.061/2	.063/4	.061/2	.063/4

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
41-43	.033/4	.034/2	.033/4	.031/2
42-44	.033/8	.031/2	.033/8	.031/2
NORTH TEXAS—				
40-41	.03	.031/8	.03	.031/8
41-43	.033/4	.033/8	.031/4	.033/8
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.033/8		.033/8	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.033/8	.031/2	.033/8	.031/2
PENNSYLVANIA (inland refineries)—				
45	.041/2	.045/8	.041/2	.045/8
46	.045/8	.043/4	.045/8	.043/4
47	.043/4	.047/8	.043/4	.047/8
CHICAGO (based on Oklahoma Group 3)—				
41-43	.033/4	.031/2	.031/4	.033/8
42-44	.031/2	.033/8	.033/8	.031/2
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.043/4	.051/4	.043/4	.051/4
NEW YORK (Bayonne, N. J.)—				
41-43	.051/2		.051/2	
GULF COAST (domestic)—				
41-43	.041/2	.045/8	.041/2	.045/8

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Dec. 4	Nov. 27
Still run	5.75	5.75
Direct from still	6.75	6.75
Egg, nut, pea	8.25	8.25
Lump	8.25	8.25

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
32-36 straw	.03	.031/8	.027/8	.031/8
36-38 straw	.031/8	.031/4	.03	.031/4
38-40 straw	.031/8	.031/4	.03	.031/4
38-40 prime white	.031/4	.033/8	.031/8	.033/8
NORTH TEXAS—				
38-40 straw	.031/8	.031/4	.03	.031/8
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.031/8	.031/4	.03	.031/8
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.031/8	.031/4	.03	.031/8
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.03	.031/4	.03	.031/8
38-40 straw	.03	.031/4	.03	.031/8
38-40 prime white	.031/8	.033/8	.031/8	.031/4
NEW YORK (Bayonne, N. J.)—				
No. 1	.051/4	.051/2	.05	.051/4
No. 2	.043/4		.041/2	
No. 4	.043/4		.041/2	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon, Diesel and fuel oils per barrel)

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
32-36 gas oil cracking stock	.017/8	.02	.017/8	.02
U.G.I. gas oil	.021/8	.021/4	.02	.021/8
32-36, zero to 15 gas oil	.021/2	.023/4	.023/8	.023/4
28-30, No. 3 burner oil	.971/2	1.021/2	.971/2	1.021/2
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.771/2	.80	.771/2	.80
20-22 fuel oil	.721/2	.75	.721/2	.75
Below 16 fuel oil	.60	.621/2	.60	.621/2
NORTH TEXAS—				
32-36 gas oil, industrial	.021/8	.021/4	.017/8	.021/8
22-26 fuel oil	.671/2	.70	.671/2	.70
Below 20 fuel oil	.571/2	.621/2	.571/2	.621/2
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03	.031/8	.021/2	.023/4
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03	.031/8	.021/2	.023/4
32-36 gas oil	.03	.033/8	.021/2	.025/8
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.02	.021/8	.017/8	.02
28-30 zero to 10, fuel oil	.95	1.00	.95	1.00
26-28 zero to 10, fuel oil	.85	.90	.85	.90
22-26 zero to 10, fuel oil	.75	.80	.75	.80
18-22 zero to 10, fuel oil	.65	.70	.65	.70
Below 18 fuel oil	.571/2	.60	.55	.60

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.031/2		.031/2	
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.05	1.15	1.05	1.15
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunkers at tidewater)	.821/2	.85	.821/2	.85
10-16 (cargo lots)	.66	.75	.66	.75
12-17 (tank cars)	.55	.80	.55	.80
San Joaquin Valley:				
10-18 (tank cars)	.50	.70	.50	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.25	1.15	1.25
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.89		.89	
GULF COAST—				
28-30 gas oil	.031/2	.035/8	.031/2	.035/8
28-30 Diesel (bunkers)	1.70		1.70	
Bunker C (bulk cargoes)	.85	.90	.85	.90
Bunker C (bunkers)	.95	1.00	.95	1.00
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.041/2	.043/4	.041/4	.041/2
28-30, Diesel (lighterage 6½ cents per bbl.)	1.89		1.89	
28-30 Diesel (tank cars)	.043/4		.041/2	.043/4
*Bunker C (to ocean-going ships in N. Y. harbor)	1.15		1.15	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.111/4		.111/4	
180-4	.103/4		.103/4	
200-3	.113/4		.113/4	
200-4	.111/4		.111/4	
240-3	.133/4		.133/4	
240-4	.131/4		.131/4	
280-3	.143/4		.143/4	
280-4	.14		.14	
300-3½	.151/4		.151/4	
400-4	.171/4		.171/4	
100-2 paraffin oil	.053/4		.053/4	
15-20 Cold Test:				
200-3	.103/4		.103/4	
200-4	.101/4		.101/4	
240-3	.123/4		.123/4	
240-4	.121/4		.121/4	
280-3	.133/4		.133/4	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.071/4	.071/2	.071/4	.071/2
300-3	.071/2	.08	.071/2	.08
500-3½	.081/2	.09	.081/2	.09
750-3½	.09	.091/4	.09	.091/4
1,200-3½	.091/2	.093/4	.091/2	.093/4
2,000-4	.093/4	.10	.093/4	.10
Red Oils:				
200-5-6	.07	.071/4	.07	.071/2
300-5-6	.071/4	.071/2	.071/4	.071/2
500-5-6	.08	.081/2	.08	.081/2
750	.081/2	.09	.081/2	.09
1,200-5-6	.091/4	.091/2	.091/4	.091/2
CALIFORNIA—				
Pale Oils:				
100-2½-3	.121/2	.141/2	.121/2	.141/2
200-2½-3	.121/2	.141/2	.121/2	.141/2
300-3-3½	.121/2	.141/2	.121/2	.141/2
350-3-4	.121/2	.141/2	.121/2	.141/2
400-3-4	.121/2	.141/2	.121/2	.141/2
450-3-4	.121/2	.141/2	.121/2	.141/2
550-3-4	.121/2	.141/2	.121/2	.141/2
600-3-4	.121/2	.141/2	.121/2	.141/2
Red Oils:				
200-4-5	.121/2	.141/2	.121/2	.141/2
300-5-6	.121/2	.141/2	.121/2	.141/2
350-5-6	.121/2	.141/2	.121/2	.141/2
400-5-6	.121/2	.141/2	.121/2	.141/2

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OCCUPATION.....

Check your branch of industry: ☐Producing ☐Refining ☐Natural Gasoline ☐Pipe Line

450-5-6	.12½	.14½	.12½	.14½
500-5-6	.12½	.14½	.12½	.14½
600-5-6½	.12½	.14½	.12½	.14½
700-6½ plus	.12½	.14½	.12½	.14½
750-6½ plus	.12½	.14½	.12½	.14½
900-6½ plus	.12½	.14½	.12½	.14½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color, 400-405 flash:				
Zero pour test	.24	.24½	.23½	.24
10 pour test	.23	.23½	.22½	.23
15 pour test	.22½	.23	.22	.22½
25 pour test	.22	.22½	.21½	.22
180 vis. at 70° F., 3 color:				
25 pour test	.25	.25½	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.30½	.31	.30	.30½
10 pour test	.29½	.30	.29	.29½
15 pour test	.29	.29½	.28½	.29
25 pour test	.28	.28½	.27½	.28

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
Bright Stocks:				
190-200 D	.16½		.17	
150-160 D, 0-10	.13½		.14	
150-160 D, 10-25	.13		.13½	
150-160 24-40	.12½		.13	
150-160 E	.12½		.13	
Steam refined:				
630 light green (treated)	.08	.08½	.08½	.09
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.19½	.21	.20	.21½
15 pour test	.18½	.20½	.19	.21
20 pour test	.18	.20	.18½	.20½
25 pour test	.15½	.16½	.16	.17
Steam refined:				
600	.08½	.09½	.08½	.09½
650	.12	.12½	.12	.12½
600 Pennsylvania flash	.13	.13½	.13	.13½
630 flash	.17	.17½	.17	.17½
600 Warren E filtered	.13	.13½	.13	.13½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Dec. 4		Nov. 27	
124-126 white crude scale	.03⅛	.03¼	.03¼	.03⅜
PENNSYLVANIA—				
122-124	.0325	.0330	.0325	.0330
124-126	.0330	.0335	.0330	.0335
NEW YORK—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.03⅛	.03¼	.03⅛	.03¼
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Dec. 4	Nov. 27
U. S. Motor	.03⅞	.03⅞
60-62 400	.04	.04
61-63 390	.04⅛ .04¼	.04⅛ .04¼
64-66 375	.04⅜	.04⅜
LOS ANGELES, CALIF.—		
U. S. Motor grades:		
53-55 octane	.04 .04¼	.04 .04¼
55-65 octane	.04¼ .04½	.04¼ .04½
65-67 octane	.04½ .04¾	.04½ .04¾
67-69 octane	.04¾ .05	.04¾ .05
Above 69 octane	.05 .05¼	.05 .05¼
58-60 400 endpoint	.04¾ .05½	.04¾ .05½

KEROSENE

GULF COAST—				
41-43 prime white	.03⅞		.03⅞	
41-43 water white	.04		.04	
44 water white	.04⅛		.04⅛	
LOS ANGELES, CALIF.—				
41-43 water white	.04½	.04¾	.04½	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.19	.20	.20	.21
600 S.R. unfiltered	.14½	.15	.15	.15½
650 S.R. unfiltered	.17½	.18	.18	.18½
600 flash S.R.	.18½	.19	.19	.19½
630 flash S.R.	.22½	.23	.23	.23½
Bright Stocks:				
8 color	.22	.23	.22	.23
6½ plus color, in dilution	.21	.21½	.21½	.22

NEUTRAL OILS

200-3 color	.34½	.35	.34	.35
150-3 color	.27½	.28	.27	.28

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—				
120-122 a.m.p.	.0405	.0425	.0405	.0425
123-125 a.m.p.	.0435	.0455	.0435	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Gravity—	Oklahoma and Kansas 1	North Texas, Central Texas and East Central Texas 2	North Louisiana and Arkansas 3	Gray County, Texas 4	Carson, Hutchinson and Moore Counties, Texas 5	Conroe, Texas 6	Salt Creek, Wyo. 7	Gulf Coast, Texas and Louisiana 8	Gulf Coast, Texas and Louisiana 9	Cotton Valley, Louisiana 10
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Effective December 3, Panhandle Refining Co., purchasing oil in North Texas, posted below 29 degrees, 68 cents; 29-29.9 degrees, 70 cents, with 2 cents added for each additional degree up to 40 and over, at 92 cents.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phiitex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, Texas Co. of Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phiitex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Phiitex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phiitex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30, by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7—Effective September 29, by Stanolind Oil & Gas Co.

Column 8—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana; 20-20.9°, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana; below 20°, 72 cents, with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 41)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas $1.00
Corsicana (heavy) (June 17, 1933)* ..... .80
Other fields ..... (See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., Empire Oil & Refining Co., and Atlas Pipe Line Co. posted 60 cents per barrel in East Texas, but on November 3 resumed its posted price of $1 per barrel, making it retroactive to October 22.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .75
Pecos County, Yates shallow Pool (Sept. 29, 1933)* ..... .65
Jones and Fisher Counties*. See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers.

Tomball (see note)* ..... (See gravity table) $1.15
Livingston (Sept. 29, 1933)† 1.00
Cleveland (Jan. 11, 1934) 1.06
Greta (Sept. 29, 1933) ..... .85
Refugio, light ..... (See gravity table)
Refugio, heavy (Sept. 29, 1933)‡ ..... .85
Markham and High Island ..... (See Gulf Coast gravity table)
Conroe ..... (See Conroe gravity table)
Bosco, La. (Oct. 15, 1934)§ $1.02

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co. and November 10 by Stanolind Crude Oil Purchasing Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

South Central and Southwest Texas

(See note below table)

Darst Creek ..... $.87
Mirando ..... .80
Luling (Sept. 29, 1933) ..... .75
Pettus 1.05
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933) ..... .95
Duval County (Sept. 29, 1933) ..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by

(Continued on Page 41)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

December 3, 1934

Taxes

The gasoline quotations given in the following tables include the 1-cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 3 cents a gallon off retail prices is permitted for purchases running between 4,000 and 10,000 gallons a month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18.0	20.0	5.0	12.5
Pueblo	18.0	20.0	5.0	11.0
Grand Junction	18.5	20.5	5.0	15.0
Casper, Wyo.	18.0	20.0	5.0	11.5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont.	21.0	23.0	6.0	17.5
Billings	21.0	23.0	6.0	16.5
Helena	23.0	25.0	6.0	17.5
Great Falls	21.5	23.5	6.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Boise, Idaho	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	15.0	20.0	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	14.8	14.8	4.0	8.0
Decatur, Ill.	14.4	9.9	4.0	10.2
E. St. Louis	14.1	11.0	4.0	9.5
Joliet	14.5	16.5	4.0	10.2
Peoria	14.4	11.5	4.0	10.2
Quincy	12.9	14.9	4.0	10.0
Davenport, Ia.	14.2	14.0	4.0	10.1
Des Moines	14.1	16.1	4.0	10.1
Mason City	14.4	16.4	4.0	10.1
Sioux City	14.3	16.3	4.0	9.7
Duluth, Minn.	15.0	17.0	4.0	10.4
Mankato	14.7	16.7	4.0	9.5
Minneapolis	15.7	13.4	4.0	10.4
LaCrosse, Wis.	15.7	17.7	4.0	10.8
Green Bay	15.9	17.9	5.0	10.2
Milwaukee	15.8	17.8	5.0	9.0
Madison	16.0	18.0	5.0	9.9
Detroit, Mich.	15.0	17.0	4.0	10.5
Grand Rapids	14.7	16.7	4.0	10.2
Saginaw	15.0	17.0	4.0	10.5
Evansville, Ind.	13.5	13.5	5.0	10.0
Indianapolis	16.1	18.1	5.0	10.2
South Bend	16.4	18.4	5.0	9.0
Fargo, N. Dak.	15.7	17.7	4.0	11.4
Huron, S. Dak.	16.2	18.2	5.0	11.4
Sioux Falls	15.6	17.6	5.0	10.9
Kans. C., Mo.*	13.6	15.6	4.0	7.5
Springfield	13.2	15.2	4.0	8.8
St. Louis	13.7	13.5	3.5	8.7
St. Joseph*	13.6	15.6	4.0	7.8
Wichita, Kans.	13.2	15.2	4.0	7.5
Bartlesville, Ok.	15.7	18.2	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolex Furnace Oil in Chicago

Effective Nov. 4, 1934, f.o.b. Chicago tank wagon prices: No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7¼ cents; 150 gallons or more, 6½ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7¼ cents; No. 3 (23-26, zero), less than 150 gallons, 7 cents; No. 4 (13-16 zero), less than 400 gallons, 6½ cents; viscosity of No. 4, 35 at 100° F.; No. 5, less than 400 gallons, 5¾ cents. For deliveries of more than stated quantities of Nos. 2, 3, 4 and 5, deduct 1 cent.

Naphtha

	Tank wagon*
Oleum spirits	16.9

1-cent Federal tax.

V.M.&P. naphtha	12.0
Cleaners' naphtha	13.0
Stanisol	18.0

*Prices include 2-cent Illinois tax, but not Prices f.o.b. Chicago, September 12, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	15.0	16.0	7.0	14.5
Augusta	16.0	17.0	7.0	14.5
Macon	19.0	21.0	7.0	14.5
Savannah	17.5	19.5	7.0	14.0
Birm'ham, Ala.	19.0	21.0	8.0	12.0
Mobile	16.5	17.5	8.0	12.0
Montgomery	17.0	18.0	8.0	15.0
Jackson, Miss.	17.5	19.5	8.0	13.0
Vicksburg	17.5	19.5	7.0	12.0
Jack'ville, Fla.	18.0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	16.0	17.0	8.0	13.5
Tampa	18.0	20.0	8.0	12.5
Lexington, Ky.	16.0	17.5	6.0	11.5
Covington	14.5	15.5	6.0	11.5
Louisville	16.0	17.5	6.0	11.0
Paducah	13.5	14.5	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	11.0	13.0	5.0	6.0
Fort Worth	11.0	13.0	5.0	6.0
Houston	15.0	17.0	5.0	8.5
San Antonio	16.0	18.0	6.0	8.5
El Paso	18.0	20.0	5.0	11.0
Muskogee, Ok.	15.0	17.0	5.0	6.0
Okla. City	15.0	17.0	5.0	7.0
Tulsa	15.0	17.0	5.0	7.5
Ft. Smith, Ark.	14.5	16.5	5.0	8.0
Little Rock	17.0	19.0	7.5	9.0
Texarkana	13.0	15.0	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	9.5	12.0	4.0	10.0
Newark	7.4	9.9	4.0	8.5
Annapolis, Md.	14.5	18.0	5.0	10.0
Baltimore	14.0	17.5	5.0	8.5
Cumberland	15.5	19.0	5.0	12.7
Wash'g'n, D. C.	12.0	15.5	3.0	11.5
Danville, Va.	16.5	20.0	6.0	12.9
Norfolk	15.0	18.5	6.0	11.3
Petersburg	15.5	19.0	6.0	11.4
Richmond	15.5	19.0	6.0	11.7
Roanoke	16.5	19.5	6.0	12.9
Charls'n, W.Va.	15.0	18.5	5.0	12.6
Parkersburg	14.5	18.0	5.0	11.2
Wheeling	15.0	18.5	5.0	13.2
Charlotte, N. C.	16.5	19.0	7.0	13.5
Hickory	15.5	18.0	7.0	13.7
Mt. Airy	17.0	20.0	7.0	13.8
Raleigh	15.5	18.0	7.0	13.3
Salisbury	13.5	15.0	7.0	13.6
Charleston, S.C.	15.2	18.7	7.0	11.3
Columbia	14.9	17.4	7.0	13.2
Spartanburg	14.5	17.0	7.0	13.5

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	15.6	17.4	5.0	10.0
McCook	16.3	17.9	5.0	10.0
Norfolk	16.0	17.9	6.0	10.4
North Platte	16.4	18.3	6.0	8.0
Scottsbluff	17.1	18.3	5.0	9.0

Note—Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents. Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents. Reliance (third brand) 2½ cents under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	15.5	19.0	‡8.0	†10.0
Baton Rouge	14.0	17.5	6.0	†12.0
Alexandria	15.0	18.5	*7.0	†10.0
Lafayette	15.0	18.5	*7.0	†12.0
Lake Charles	15.0	18.5	*7.0	†12.0
Shreveport	13.0	16.5	6.0	†10.0
Knoxville, Tenn.	15.0	17.5	5.0	13.5
Memphis	17.0	20.5	8.0	10.5
Chattanooga	13.5	16.0	8.0	11.0
Nashville	12.9	15.4	8.0	12.0
Bristol	13.9	16.4	6.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. ‡Includes 2-cent parish tax.

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank wagon†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
San Francisco	16.5	18.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	12.5
Fresno, Calif.	17.0	19.0	4.0	14.0
Phoenix, Ariz.	17.0	19.0	6.0	‡16.0
Reno, Nev.	19.0	21.0	5.0	15.5
Portland, Ore.	19.0	21.0	4.0	13.5
Seattle, Wash.	19.0	21.0	4.0	13.5
Tacoma	19.0	21.0	4.0	13.5
Spokane	22.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5-cent state tax.

Canada*

IMPERIAL OIL, LTD.

Imperial 3-Star Gasoline

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Hamilton Ont.	†21.0	22.5	6.0	17.5
Toronto, Ont.	†21.0	22.5	6.0	17.5
Brandon, Man.	30.3	33.3	7.0	21.8
Winnipeg, Man.	28.7	31.7	7.0	20.2
Regina, Sask.	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.8	34.8	6.0	24.3
Edmonton, Alta.	31.2	34.2	6.0	23.7
Calgary, Alta.	28.5	31.5	6.0	21.0
Vancouver, B.C.	27.0	30.0	7.0	24.0
Montreal, Que.	24.0	27.0	6.0	17.0
St. John, N.B.	26.0	30.0	8.0	19.5
Halifax, N. S.	26.0	30.0	8.0	19.5

*Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all dealers 4 cents off service station price. All other provinces open dealers 2.5 cents off service station price and 1 cent additional to 100 per cent accounts.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Phil'delphia, Pa.	11.5	11.5	4.0	9.0
Pittsburgh	14.0	16.0	4.0	10.0
Allentown	13.25	15.0	4.0	10.0
Erie	14.0	16.0	4.0	9.0
Scranton	13.25	15.0	4.0	10.0
Altoona	14.0	16.0	4.0	10.0
Dover, Del.	13.25	15.0	4.0	10.0
Wilmington	13.25	15.0	4.0	9.0
Springf'd, Mass	14.5	16.5	4.0	7.5
Worcester	14.5	16.5	4.0	8.5
Hartford, Conn.	13.5	15.5	3.0	7.5
New Haven	13.5	15.5	3.0	7.0
Providence, R.I.	13.0	15.0	3.0	8.0

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	16.5	16.5	4.0	8.5
Met. New York	16.0	17.0	4.0	8.0
Buffalo	11.5	11.5	4.0	8.0
Rochester	13.5	13.5	4.0	8.5
Syracuse	16.0	17.0	4.0	8.75
Boston, Mass.	15.0	16.0	4.0	8.0
Portland, Me.	17.0	18.0	5.0	8.75
Manch't'r, N.H.	15.0	17.0	5.0	9.0
Burlington, Vt.	18.5	19.5	5.0	9.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	15.5	17.5	5.0	*12.5

*Includes state tax of 1 cent, effective July 22.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Standard Oil Co. of Louisiana, November 22, advanced tank wagon gasoline 4.1 cents and station gasoline 5.1 cents in Memphis. November 24, advanced tank wagon gasoline 1.5 cents and station gasoline 2.5 cents in New Orleans.

Standard Oil Co. of Kentucky, November 26, reduced tank wagon kerosene 2 cents in Birmingham. November 30, advanced tank wagon gasoline 2.5 cents and station gasoline 3.5 cents in Macon.

Imperial Oil Co., Ltd., November 27, reduced tank wagon kerosene 1.5 cents in St. John and Halifax.

Standard Oil Co. of New Jersey, November 20, reduced tank wagon kerosene 1 cent in Baltimore.

Continental Oil Co., November 27, advanced tank wagon and station gasoline 2 cents in Salt Lake City.

Atlantic Refining Co., November 26, advanced tank wagon kerosene one-half cent in Providence.

Socony-Vacuum Oil Co., Inc., November 27, reduced tank wagon and station gasoline 1.5 cents in Buffalo. November 28, reduced tank wagon gasoline 2 cents and station gasoline 1 cent in Manchester.

Magnolia Petroleum Co., November 27, reduced tank wagon and station gasoline 1 cent in Muskogee and Tulsa. November 28, advanced tank wagon and station gasoline 2 cents in Houston. November 29, advanced tank wagon and station gasoline 1 cent in El Paso.

December Allowable Set at 936,277 Bbls. in Texas

AUSTIN, Tex., Dec. 3.—The Railroad Commission's December proration order, makes the state total 936,277 bbls. daily which includes an initial 398,160 bbls. for East Texas to grow with completions, averaged at 10 daily.

The East Texas per well allowable was reduced from 3.6 per cent of an hour's potential flow to 3.45 per cent. East Texas is producing around 414,000 bbls. daily which makes the net cut there approximately 15,000 bbls.

Texas was assigned a market demand of 941,300 bbls. daily by Harold L. Ickes, based on the calculations of the U. S. Bureau of Mines. The Texas commission's new total is 5,023 bbls. below the Ickes allocation, but there will be more leeway as the commission contemplates taking bottom hole tests for declining pressure in the Government Wells, Southwest Texas, district, sure to still further pull down the state allowable. This policy is also to be pursued in other places with the same results expected.

Legal output under proration orders is now approximately 957,000 bbls. per day, 15,700 above Ickes' estimate and approximately 21,250 more than the new allowable for December.

The new order, effective at 7 a.m. December 1, adopts the following changes: East Central 46,552, increase 3,106; West Texas 129,717, decrease 1,160; Gulf Coast 161,633, decrease 926; Southwest Texas 36,860, decrease 2,687; Government Wells 19,055, decrease 2,581 bbls. daily.

NEWS FOR SALES DEPARTMENTS

Challenges Low Gasoline Prices in New Jersey Area

NEW YORK, Dec. 4.—In an attempt to end the price war which has prevailed in northern New Jersey over the past month the Warner Quinlan Co. today advanced the service station price on regular branded grade gasoline 4.6 cents to 14.5 cents including 3-cent state and 1-cent Federal tax. The price increase included Newark. It was reported at noon that three large distributors had met the increase in part of New Jersey.

Standard Oil Co. of New Jersey this noon announced that it had advanced its regular and premium grades grasoline 1 cent and would advance third grade one-half cent in the next few days at points in New Jersey which are now below normal provided today's advance is met by other large and small distributors. It was indicated in some quarters that certain major companies would not advance prices until an agreement to cover marketing practices in this territory adopted last week had been passed on by representatives of the Government at Washington.

L. V. Nicholas, president of Warner Quinlan, who is responsible for the action of his company, in newspaper advertisements appearing in New Jersey newspapers today, appealed for public support of the higher prices. His statement said in part: "When a battle for more business has reached the point where it directly affects the best interests of the consumer as well as the industry, it's time for decisive action. Let us look at the facts. Today, as you know, the price of regular gasoline in Newark and northern New Jersey is 5.9 cents a gallon without tax. This price is less than actual cost—and even this price of 5.9 cents is being cut. Obviously such a condition can only lead to business suicide.

"The average persons say: 'Well, if the oil companies want to cut their own throats, it's okay with me'—and he thinks no more about it. Well, it may be okay for the present, but when any branch of industry cuts its own throat the public pays the bill in the long run.

"Through a form of commercial blackmail, legitimate distributors have been forced to reduce price to a point where, instead of acting as a corrective, the price structure is now definitely destructive. The basis of any intelligently operated business is a legitimate product at a legitimate price. Under conditions at present prevailing in the oil industry, such a basis of operation is impossible. This is clearly a betrayal of the industry's well defined responsibility to the public. If the situation is allowed to continue, the quality of the gasoline you buy and the kind of service you get must inevitably suffer. Furthermore, it is a condition that must eventually entail large public losses—losses that come out of the car owner's pocketbook.

"In raising our price on gasoline to 14¼ cents, including 4 cents tax, we are not expecting by any manner of means to make a profit. What we do hope to accomplish, however, is to help re-establish the market and restore a legitimate price structure. Any company that sells its gasoline for less than 14½ cents cannot justify its price and we challenge them here and now on the basis of actual costs to defend such a price to the public."

CHICAGO OIL MEN'S CLUB

CHICAGO, Dec. 3.—The grand opening of the new clubrooms of the Chicago Oil Men's Club at 616 South Michigan Avenue, has been announced to take place on Thursday, December 20, from 12 to 3 p.m. with the compliments of the club to members and invited guests. H. George Donovan, secretary of the club, is preparing the mailing list for invitations.

Revenues From Automotive Sources Drop During Year

The Federal Government obtained $5,500,000 less revenue from automotive products and services during October, 1934, than it did during the same month last year. Despite a 33 per cent decrease in the rate of the Federal tax on gasoline, motor fuel collections dropped less than 17 per cent. However, revenue from four other automotive sources decreased from 21 to 45 per cent, although their tax rate remained the same.

Revenue from automobile and motorcycles decreased 45.5 per cent; tires, 42.3 per cent; inner tubes, 35.1 per cent; and pipe line transportation, 21 per cent. The approximate collections of automotive revenues are given in the table below:

Source of revenue—	Amount collected (millions of dollars) October, 1934	October, 1933	Per cent
Lubricating oils	$2.63	$2.09	+25.9
Gasoline	18.80	22.54	—16.6
Tires	1.54	2.67	—42.3
Automobile trucks	.47	.38	+23.0
Automobiles and motorcycles	1.40	2.57	—45.5
Auto parts and accessories	.54	.49	+9.0
Transportation of oil by pipe lines	.68	.85	—21.0
Inner tubes	.38	.58	—35.1
Crude petroleum processed, etc.	.15	...	...
Total	$26.58	$32.18	

Speedway Provides Highest Test of Auto Improvement

The race track is the experiment station and the race drivers are the guinea pigs of the automobile industry, Frank R. Elliott, field engineer of the Ethyl Gasoline Corp., says in a report of a study of racing and fuel development.

Out of the contests at the Indianapolis Speedway, in which a driver will lose as much as 10 pounds in driving 500 miles, have come advances in design, construction and fuel economy which affect every type of car, according to Mr. Elliott, a former racer.

"Ordinarily we can find out more about new developments in tires, steering, balance, ignition, engine design, fuels, etc., in a few hours on the race track than we can in months of road testing," he declares.

"If a new feature shows results during one of these races, we can reasonably expect to see it crop out in somebody's production car within four or five years. The Indianapolis track has been the test of all tests because the conditions surrounding the Memorial Day Classic make this race a real proving ground for everything in the car.

"The 1934 winner used only 35½ gallons of fuel or an average of 14.1 miles per gallon. The cars racing in 1924 used 45 to 50 gallons of fuel for the race, so the 1934 winner used about 20 per cent less fuel in spite of traveling at 6½ miles per hour faster average speed than the 1924 winner. Since 1924 the winners of every race at Indianapolis have used gasoline containing tetraethyl lead.

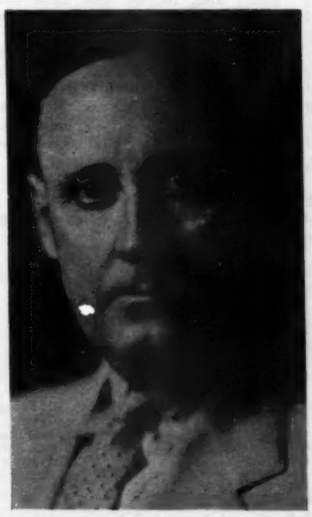
"In the early days of racing, most of the cars were rebuilt stock cars. They were equipped with higher rear axle ratios to increase their top speed. But acceleration, then as now, was a very important factor in winning races, so to stay in the competition, the engines had to be 'souped up.' This was generally done by using larger carburetors, larger manifold passages and valves, and special camshafts, all with the idea of getting more fuel into the engine.

"Some of these early engines were huge in comparison even with modern bus and truck engines, the bore and stroke being sometimes as high as 5½"x7". These large engines could only turn up to about 1,000 to 1,200 r.p.m., while 1,500 to 1,800 r.p.m. was considered fast even for the smaller engines. Today, racing engine speeds of between 5,000 and 6,000 r.p.m. are not unusual.

"The changing trends in engine design toward smaller cylinders and higher speeds are imposing greater and greater loads on many of the working units of engines, and while the direction of these trends has been rather clearly recognized for some years, development limitations have been imposed by lack of ideally suited materials, cooling limitations, etc. Such items as valve springs, for example, assume great importance from the standpoints of surge characteristics, speed of reaction, maintenance of tension, resistance to deterioration, or breakage due to fatigue of metal.

"The average car owner never suspects the great amount of research in metallurgy and design necessary to produce these relatively inexpensive items to meet today's conditions in average automobiles. Breakage is still encountered, of course, but generally only after many thousands of miles of operation.

H. A. TROWER » » »



HIS familiarity with the ins and outs of railroading brought H. A. Trower into the oil business. Mr. Trower is now vice president in charge of sales for the Phillips Petroleum Company. Born at Round Grove, Mo., he spent his boyhood on a Kansas farm and in 1907 began his railroad career as telegraph operator, later advancing to relief agent, station agent and traveling freight agent. In 1918, one year after Frank Phillips organized the Phillips Company, Mr. Trower became Phillips' traffic and sales manager.

As the Phillips interests grew, it soon became necessary for Mr. Trower to devote his entire time to sales. He supervised the organization and rapid expansion of the Phillips marketing division, and in April, 1930, was elected to vice presidency. He has been a president of the Natural Gasoline Association of America and is now a director of the Western Petroleum Refiners Association.

Helping a small company develop into a big one, supervising the expansion of sales operations to include nearly everything from half-pint cans of insecticide to cargoes of natural, building an entire marketing division from the ground up and selecting and backing up the men who assist him—these duties are partly responsible for the absence of vacations in Mr. Trower's schedule.

October Marks Upturn in California Tax Income

Breaking a decline begun last June, the California gasoline tax for October has reached a total of $3,422,047.20, an increase of $240,038.38 over the corresponding figure for the same month of 1933. This is a gain of 7.5 per cent in contrast with losses ranging from 9.7 per cent to 4.4 per cent for each of the four preceding months.

The total taxable gallonage for October has been recorded at 115,220,440.8 and oil companies reporting sales of more than 1,000,000 gallons each are included in this total. Resale of gasoline already taxed to some other company, as well as non-taxable transactions in interstate or foreign commerce, account for differences between total sales and taxable sales announced as follows:

Name—	Gallons actually sold	Net taxable gallonage
Associated Oil Co.	15,311,912	10,733,053
Bush, R. R.	1,115,180	1,119,499
Caminol Co., Ltd.	1,941,410	1,961,020
Exeter Refining Co.	1,217,339	1,203,567
General Pet. Corp.	16,884,195	8,908,396
Macmillan Pet. Corp.	1,993,079	2,012,536
Western Oil & Ref.	1,942,487	1,958,453
Hancock Oil Co.	2,634,070	2,580,575
Richfield Oil Co.	9,816,260	8,508,213
Mohawk Pet. Co.	1,953,219	1,672,235
Norwalk Co.	2,252,707	1,093,121
Olympic Ref. Co.	1,201,422	1,181,282
Petrol Corp.	1,395,161	1,382,158
Rio Grande Oil Co.	2,991,257	2,776,731
Sunset Pacific Oil Co.	3,887,795	2,222,985
Seaside Oil Co.	2,266,311	1,166,411
Shell Oil Co.	33,932,757	12,470,213
Standard Oil Co.	52,063,645	20,152,226
St. Helens Pet. Co.	1,203,151	1,125,654
Texas Co.	13,847,535	4,661,619
Union Oil Co.	23,373,521	12,643,121
Wilshire Oil Co.	4,411,891	4,445,059

SALES MANAGER APPOINTED

W. S. McCullough has recently been appointed sales manager of the Overton Refining Co., Inc., of Overton, Tex. This company also markets the products of the Kilgore Refining Co., Inc., Kilgore, Tex.

NATURAL GASOLINE MANUFACTURE

New Premium Gasolines Will Feature Volatility

The announcement this week that two major refinery marketing companies would feature volatility in their new premium fuels and would give the higher octane number of their new fuels secondary consideration, should prove particularly interesting to natural gasoline manufacturers and marketers. The announcement is summarized in an article by C. O. Willson in the current issue of The Oil and Gas Journal appearing on page 13, and attention should be given to the fact that the detailed specifications on the two fuels mentioned require that the distillation range be equal to or better than fighting grade aviation gasoline in so far as front-end volatility is concerned.

The two refining companies making the announcement are the Standard Oil Co. of New Jersey and the Gulf Refining Co. The expanse of the marketing operations of these two companies is sufficient to cause refining companies scattered over a major portion of the United States to recognize the change.

In the series of specifications adopted by the New Jersey company for its new Aerotype Esso motor fuel at least 23 per cent of the gasoline must distill over at 158° F. Fighting grade aviation gasoline requires but 8 per cent. Premium gasoline on the general market at present shows about 20 distilling over at that temperature.

A more significant factor in the new specifications is that 83 per cent must distill over at 257° F. Generally speaking, premium gasolines now being offered show only about 65 per cent distilling over at this temperature. This means that about 18 per cent more gasoline will have to be crowded into the fore part of the distillation range and it is this portion of the range that is most important to natural gasoline.

However, beyond the fact that the introduction of these new gasolines will make the buying public more volatility conscious, it is difficult to say how much immediate benefit will accrue to the natural gasoline manufacturer. Some refiners can make fighting aviation gasoline without using a drop of natural. Other refiners use up to 40 per cent natural in making fighting aviation gasoline. The

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Final 1933 Natural Gasoline Summary Shows Decrease in Average Yield

The production of natural gasoline continued to decline in 1933 when the total output was 1,420,000,000 gallons, the lowest figure since 1926 and a decrease of 7 per cent from 1932, according to statistics compiled by the U. S. Bureau of Mines, Department of the Interior. This decrease resulted solely from a decline in the average yield of from 1.02 gallons per 1,000 cubic feet of gas treated in 1932 to .92 gallon in 1933.

Until recent years there was considerable relationship between the production of natural gasoline and that of crude oil as much of the gas utilized at natural gasoline plants is produced in conjunction with crude oil. However, the output of natural gasoline in recent years has declined irrespective of the trend of crude oil production; for example, in 1933, the production of crude oil increased 15 per cent but the output of natural gasoline decreased 7 per cent.

This significant development has resulted from a number of causes, chief of which are, first, the curtailment in supply of gas from flush fields as the result of proration; second, the effect of the discovery of the East Texas Field, an important factor in oil production but, because of its low gas-oil ratio, of minor importance in natural gasoline production; third, the rapid increase in the quantity of low-yield dry gas processed in the Panhandle as an aftermath of the passage of laws permitting stripping; and, fourth, and most important of all, the loss in yield due to progressively high stabilization.

The concentration of the natural gasoline industry in fewer hands was continued in 1933 where there were 291 operators and 779 plants, compared with 302 operators and 830 plants in 1932. According to a biennial survey just com-

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NATURAL GASOLINE PRODUCED AND NATURAL GAS TREATED IN THE UNITED STATES, 1933, BY STATES

	No. of operators	No. of plants operating	Natural gasoline produced: Thousands of gallons	Value at plants: Thousands of dollars	Average per gal. (cts.)	Estimated quantity of natural gas treated: Millions of cu. ft.	Avg. yield per M. cu. ft. (gals.)
Arkansas	9	11	15,215	602	4.0	4,949	3.07
California	42	97	496,293	22,820	4.6	326,016	1.52
Kansas	12	18	24,869	841	3.4	52,939	.47
Louisiana	15	28	36,973	1,149	3.1	80,891	.46
New Mexico	2	2	19,149	654	3.4	10,399	1.84
Oklahoma	75	185	360,488	12,177	3.4	351,989	1.02
Pennsylvania	63	108	11,686	568	4.9	21,810	.37
Texas	59	116	366,515	11,562	3.2	532,148	.69
West Virginia	28	92	39,848	1,803	4.5	90,072	.44
Wyoming	7	10	34,103	1,387	4.1	18,630	1.83
Other	44	112	14,861	805	5.4	51,621	.29
Total	*291	779	1,420,000	54,368	3.8	1,551,464	.92

*A producer operating in more than one state is counted only once.

SUMMARY OF STATISTICS OF NATURAL GASOLINE IN THE UNITED STATES, 1932 AND 1933

(Millions of gallons)

	1932	1933
Production by types of process:		
Compression process	182	161
Absorption and combination processes	1,333	1,251
Charcoal	9	8
Stocks at natural gasoline plants at end of year	19	28
Stocks at refineries	115	111
Blended at refineries	1,053	1,011
Run through pipe lines in California	53	54
Blended at plants	2	6
Exports and sales to jobbers	226	193
Production of liquefied gases	34	39
Average spot price Oklahoma natural gasoline, Grade 26-70 (cents)	2.3	2.9

Wiley Post Used Motor Fuel Made From Natural

The fuel which drove Wiley Post to what appears to be a new altitude record for heavier-than-air craft was a 7-pound, leaded natural gasoline. Taking off from the Bartlesville, Okla., airport of the Phillips Petroleum Co. at 8:10 o'clock Monday morning of this week, Wiley Post elevated his plane at the rate of 1,000 feet a minute until an altitude of 35,000 feet had been exceeded and then the supply of oxygen was cut off through failure of a part of the supply mechanism. He lost full consciousness but continued to gain elevation until it now appears certain that a new altitude record was established. The result will not be definitely established, however, until the barograph is checked in Washington. Experts who studied the condition of the finish on the plane, the general appearance of the plane after it landed in Muskogee, etc., feel sure the record of 47,352.2 feet established by Lieutenant Donati of Italy would be exceeded. Mr. Post's plane had previously gone to 42,000 feet and it was possible to make comparisons.

The fuel used was the regular Phillips aviation gasoline. It was 100 per cent Phillips natural gasoline, stabilized to 7 pounds vapor pressure and was leaded to 80 octane number. The statement made by Wiley Post after the flight indicated he had witnessed no trouble with the engine at any time and that he could have taken the famous "Winnie Mae" 10,000 feet higher had the oxygen supply not failed.

CODE BUDGET APPROVED

The code authority for the liquefied gas industry has made application to the National Industrial Recovery Board for approval of its budget and of the basis of contribution to the same by members of the industry.

The total of the budget is $18,460 for the period of November 8, 1933, to November 1, 1934.

It is provided that the basis of assessment shall be in uniform percentage of each marketer's "revenue" from liquefied gas, with a minimum assessment for any annual period, of $2. The amendment gives the technical trade definitions of the terms "revenue" and "marketers" as applied to this industry.

DEPARTMENT OF THE INTERIOR, BUREAU OF MINES

Summary of Monthly Natural-Gasoline Statistics in the United States in 1933, in Millions of Gallons

Production by fields:	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1933	1932
Appalachian	6.1	5.7	6.0	5.0	3.9	3.0	3.3	3.3	3.9	5.1	5.4	5.6	56.3	60.7
Kentucky, Illinois, Michigan	.8	.8	.8	.7	.6	.5	.6	.6	.6	.8	.8	.8	8.4	9.4
Oklahoma:														
Oklahoma City	6.7	6.8	7.5	5.5	6.8	8.2	8.7	9.0	8.6	9.4	9.4	9.9	96.5	78.4
Osage County	3.4	3.0	3.5	3.5	3.6	3.3	3.4	3.4	3.5	3.8	3.4	3.3	41.1	49.0
Seminole	9.3	8.0	9.3	8.9	8.9	8.9	10.0	10.1	9.9	9.7	8.9	8.9	110.8	130.0
Rest of State	9.4	7.7	9.6	9.3	9.6	9.2	9.6	9.4	9.4	10.0	9.4	9.5	112.1	121.2
Total Oklahoma	28.8	25.5	29.9	27.2	28.9	29.6	31.7	31.9	31.4	32.9	31.1	31.6	360.5	378.6
Kansas	2.4	2.2	2.1	2.2	1.9	1.8	1.7	1.8	1.9	2.2	2.4	2.3	24.9	24.8
Texas:														
East Texas	1.2	1.2	1.7	.9	1.9	1.8	1.9	1.9	1.7	2.0	1.9	2.1	20.2	10.4
North Texas	2.3	2.0	2.4	2.0	2.2	2.0	1.9	1.9	2.1	2.3	2.2	2.4	25.7	30.2
Panhandle	14.0	12.4	14.8	14.6	15.1	14.6	14.8	14.8	14.6	17.0	18.2	18.9	183.8	182.6
West Central	6.4	5.4	6.4	6.3	6.7	6.4	6.9	6.9	6.5	6.5	6.5	6.9	77.8	85.9
Rest of State	5.2	4.8	5.2	5.3	5.1	5.0	4.9	4.9	4.6	4.9	4.5	4.6	59.0	62.0
Total Texas	29.1	25.8	30.5	29.1	31.0	29.8	30.4	30.4	29.5	32.7	33.3	34.9	366.5	371.1
Louisiana	3.4	3.4	3.1	3.2	3.1	2.9	3.0	2.9	2.8	3.0	3.0	3.2	37.0	46.2
Arkansas	1.4	1.1	1.3	1.4	1.4	1.3	1.2	1.3	1.2	1.2	1.2	1.2	15.2	18.7
Rocky Mountain	4.8	4.2	4.7	4.3	4.5	4.4	4.4	4.4	4.6	4.8	5.2	4.6	54.9	62.4
California:														
Huntington Beach	1.4	1.3	1.3	1.5	1.7	1.8	2.2	2.8	2.5	2.8	3.1	3.0	25.4	16.4
Kettleman Hills	13.6	10.8	10.9	10.1	10.5	9.3	8.7	9.9	10.9	12.6	12.6	13.6	133.5	135.2
Long Beach	7.9	7.2	6.9	7.9	8.2	7.6	8.1	8.2	7.2	6.2	6.6	6.4	88.4	111.7
Santa Fe Springs	7.1	6.4	6.6	6.9	7.5	7.2	7.4	7.1	6.8	6.3	5.5	5.6	80.4	99.9
Ventura Avenue	4.2	3.8	4.1	3.6	3.5	3.3	3.3	3.5	3.7	3.9	4.0	4.1	45.0	43.7
Rest of State	10.5	9.3	8.9	9.9	10.6	10.3	11.0	11.2	10.9	11.4	9.6	10.0	123.6	145.0
Total California	44.7	38.8	38.7	39.9	42.0	39.5	40.7	42.7	42.0	43.2	41.4	42.7	496.3	551.9
Total United States	121.5	107.5	117.1	113.0	117.3	112.8	117.0	119.3	117.9	125.9	123.8	126.9	1,420.0	1,523.8
Daily average	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9	4.1	4.1	4.1	3.9	4.2
Stocks at end of period	22.6	27.3	31.6	34.2	38.9	36.7	39.9	35.6	37.8	24.0	25.9	27.6	27.6	18.8
Indicated deliveries	117.7	102.8	112.8	110.4	112.6	115.0	113.8	123.6	125.7	129.7	121.9	125.2	1,411.2	1,532.1

Governors' Conference Against Federal Control

(Continued from Page 10)

tect the domestic producers and consumers.

"4. That the governors of the oil producing states should give further careful study to the question of conservation and should meet personally or through their representatives at an early date for the purpose of discussing the desirability and or necessity of entering into an interstate compact, designed to further conserve the petroleum resources of each state."

Dow's Resolution

Mr. Dow, representing New Mexico, introduced the following resolution:

"Resolved that in principle we prefer voluntary co-operation among the states as opposed to Federal control of production and suggest the continued study of the possibilities of an interstate agreement for the voluntary co-ordination of the police powers of the states, through a committee representing the oil-producing states."

Governor Landon's Resolution

Governor Landon offered as his resolution the resolution adopted October 12 by the Planning and Coordination Committee, which also is the minority resolution presented to the board of directors of the American Petroleum Institute at Dallas recently. It follows:

"Resolved, by the board of directors of the American Petroleum Institute in annual meeting assembled at Dallas, Tex., this the fourteenth day of November, 1934, that we endorse and approve the principles and policies regarding Federal legislation affecting the oil industry heretofore enunciated by the Planning and Coordination Committee and released in a statement to the industry under date of October 12, 1934, as follows:

"Twenty-one members of the committee were present at meetings this week. The present serious conditions in the industry were discussed and several movements were put on foot to bring about better conditions. Today the committee conferred with Administrator Ickes for two hours and the administrator was fully informed as to the views and plans of the committee.

"In regard to Federal legislation differences between members of the committee have been reconciled. Those supporting the state compact plan have agreed to support the Thomas-Disney type of legislation with a provision authorizing state compacts and other changes as follows:

"Insert provisions in Thomas-Disney bill authorizing any two or more states under appropriate state legislation to enter into compact for the restriction of crude oil production in the signatory states, subject to the condition that the total allowed production for all the signatory states combined shall not be more nor less than the total production demand for such states combined as determined under the Federal act.

"Provide further that so long as the production of any state is kept within the compact figures for such state, or, if the state is not signatory to such compact, then within the production demand figure for the state, as fixed under the Federal act, no quotas shall be set for the state or for application within the state, but if in any calendar month any state shall exceed its compact figure, or, in the absence of compact, its production demand figure as fixed under the Federal act, then upon order of the President or with his approval, quotas shall be set for such state and for pools, properties, etc., within the state, as provided in the Federal act, until the President finds that necessity no longer exists and orders discontinuance of the practice.

"Change the administrative sections so that the board will be composed of the Secretary of the Interior as chairman and four or six other members to be appointed by the President, consisting of men experienced in the oil business and otherwise qualified, from the oil producing states, the appointments to be distributed so that as nearly as may be practicable each principal oil producing section will be fairly represented.

"No time limit in view of the automatic operation.

"All of this is subject to the completion of a satisfactory draft of the bill."

Address of E. W. Marland at Conference of Governors on Interstate Compact

As governor-elect of the sovereign State of Oklahoma, I have invited you to this conference to discuss matters of great concern to our several states and to our Nation.

Nature has endowed our states with a great natural resource, petroleum, of inestimable value to the people of our states and to the people of our Nation.

The initiative, energy and enterprise of our people have developed this resource and made it available to the people of the Nation.

Its importance to our modern civilization cannot be overestimated. Its value as a safeguard to the Nation and as a means of holding our commercial supremacy cannot be exaggerated.

It is estimated by competent authority that we now have an oil reserve of approximately 12,000,000,000 bbls. recoverable from proven fields by some 350,000 existing wells and wells that may hereafter be drilled in those fields.

I believe that experienced oil men will agree with me that approximately three-fourths, or 9,000,000,000 bbls. of our recoverable oil reserves, must be produced from some 300,000 small wells by mechanical methods and I believe they will agree with me that 75 per cent of this proven reserve is in danger of being lost on account of the inability of the owners of these small wells to produce their oil in competition with the oil produced from flowing wells.

It is generally recognized that 9,000,000,000 bbls. of this proven reserve must be produced by artificial methods (pumping and lifting) at a cost many times greater than the cost of production of the 3,000,000,000 bbls. of recoverable oil by flowing methods.

At the present time low cost flowing oil is being brought to the surface and dumped upon the market, thereby forcing the shutdown and abandonment of the small wells of higher production cost, with the resultant loss to the owners of the land upon which these wells are located; a loss to the state of its revenue; a loss to the people of the Nation of an irreplaceable resource of enormous economic value.

Our oil is being produced and sold on the market of the United States and of the world today at less than its economic value to the consumers when we measure this value by the probable cost of producing internal combustion engine fuel from any other source.

To produce 9,000,000,000 bbls. of oil from either shale or coal by known methods of production would probably cost $3.50 a barrel.

To recover the same amount of oil from our nonflowing settled producing oil wells in known fields, provided they can be preserved, will cost less than one-half that amount.

The prevention of the loss of production from the present small wells of this country means the saving of a resource of an economic value of approximately $15,000,000,000.

It is of great concern to us, as oil-producing states; it is of great concern to our landowners, to our taxpayers and to the public; it is of great moment to our nation that this natural resource of ours be not lost.

There is general recognition of the fact that regulation of crude oil production by governmental authority of some character is essential to prevent the waste and economic destruction of a great portion of our oil reserves.

There appears to be a growing opinion that the rate of production of oil should be balanced with the demand.

Considerable difference of opinion has arisen as to the method by which production should be kept in balance with demand.

There are three major schools of thought on the method of control of production.

One would leave the industry to accomplish restraints by agreement. However, for many reasons, that method has been a failure.

A second insists that the Federal Government should undertake control of our wells. But to many of us that means undesirable centralization of power and the breakdown of the sovereignty of the states.

A third holds that the volume of production should be controlled by the police powers of the state, co-ordinated with the other oil-producing states under an interstate compact, with the co-operation of the Federal Government in ascertaining the market demands, suggesting allowable production to the various oil-producing states, and Federal control of imports and interstate movements of oil produced in violation of state laws.

Constitutional authority for the interstate agreements has granted authority to the states to enter into interstate compacts. Under this method the states will continue to exercise self government under existing constitutional rights; these to be supplemented and not supplanted by the Federal Government.

While the Constitution of the United States expressly prohibits the states from making any agreement with each other without the consent of Congress, yet in the exercise of their sovereignty, in the exercise of the powers reserved to the states, it is their duty, Congress consenting, to enter into agreement with reference to the common good and the proper exercise of that duty forbids any state to "live unto itself alone."

In my opinion, our oil-producing states should perform their duties of sovereignty not only to their local individual interests, but in co-operation with other states for the common welfare of the nation.

This end can be achieved not by the creation of new and untried powers but by the exercise of powers already vested in the states.

It is my hope that, as a result of this meeting and conference, we will see fit by resolution to request Congress to grant permission for the states to enter into an interstate pact.

Census Bureau Survey of Wholesale and Retail Trade

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in 1933 is $151,938,000, while in 1929 it totaled $159,212,000, or a decrease of only $7,274,000 in the pay roll for the entire country.

FILLING STATION DATA

RETAIL DISTRIBUTION SURVEY FOR UNITED STATES, 1933

	1929	1933	% of change
Number of stores	121,513	170,404	
Number of proprietors	.....	156,451	
Net sales	$1,787,422,000	$1,531,724,000	—14
Per cent of total of all retail sales	3.64%	6.12%	
Full time employes (average)	126,721	143,391	
Total pay roll (full time and part time)	$159,212,000	$151,938,000	
Pay roll (part time only)	.....	$10,025,000	
Average annual earnings per full time employe	$1,208.00	$990.00	—18

EMPLOYES IN PETROLEUM INDUSTRY

(By Months)

	Wholesale		Retail*	
Month, 1933—	Full time	Part time	Full time	Part time
January	104,165	4,510	128,863	23,348
February	104,418	4,441	128,583	23,321
March	104,535	4,284	128,950	23,748
April	105,399	4,549	130,659	24,612
May	106,571	4,890	132,247	26,206
June	107,244	5,337	136,795	28,061
July	107,827	5,520	140,801	29,565
August	109,590	6,178	147,284	31,044
September	113,016	6,544	159,679	32,637
October	113,899	6,230	160,608	32,204
November	114,244	6,091	161,822	32,839
December	114,737	5,866	163,491	33,453

*Filling stations.

Judge Beaty Resigns P. and C. Chairmanship

Judge Amos L. Beaty has tendered his resignation as chairman of the Planning and Coordination Committee and a meeting of the whole committee has been called for December 17 in Washington to select a successor. Judge Beaty, it is understood, desires to go to New York to look after certain business matters at this time. He will continue, as far as known, as a director of Phillips company.

It is believed in some circles Judge Beaty will devote some time towards forwarding his desire to have included in any Federal legislation adopted at the forthcoming session of Congress a provision providing for the setting of quotas in interstate commerce of petroleum.

When Judge Beaty went on his vacation early last summer J. D. Collett of Fort Worth was selected as acting chairman of the Planning and Coordination Committee and there is some feeling the committee may select an acting chairman at the meeting December 17.

Fifth Annual Meeting of I.P.A.A., Fort Worth, Tex.

Annual reports of the executive officers, including President Wirt Franklin of Oklahoma City, Executive Vice President H. B. Fell of Ardmore, Executive Manager C. E. Buchner of Tulsa, and Treasurer G. A. Dye of Tulsa, will feature the opening session of the fifth annual meeting of the Independent Petroleum Association of America at the Blackstone Hotel, Fort Worth, Tex., on December 7.

Russell B. Brown, compliance director of the Planning and Coordination Committee of Washington, D. C., will speak on "Co-operation and Compliance." Emby Kaye, vice president of Skelly Oil Co., will speak on "The Availability of Domestic Asphalt of Proper Quality for Highway Construction."

The afternoon session will be featured by an address of T. O. Grisell, of the Kendall Refining Co., Bradford, Pa., on "Problems of Eastern Producers" and E. G. Bedford, of Midland, Tex., will speak on "How the Association Can Serve Royalty Owners."

The annual dinner will be held Friday. President Wirt Franklin presiding. Amon G. Carter, Fort Worth, Tex., will act as toastmaster. Amos L. Beaty, chairman of the Planning and Coordination Committee, and Charles Fahy, chairman of the Petroleum Administrative Board, will speak.

NEWS FOR PETROLEUM REFINERS

Labor Asked to Follow Definite Code Procedure

To clarify the position of employers and employes under the oil code the labor subcommittee of the P. and C. Committee has issued a statement as approved by Administrator Ickes. The statement concerns complaints made against employers who have announced they will comply with the wage differential order and interpretations, the order having been made on May 21 of this year and the intepretations given out on September 26. The statement follows in part:

"Employes in operations and regions where 'immediate operating areas' have been established should recognize that the wage differential order specifically permits their employers to optionally adjust plant rates to 'area prevailing rates' as a means of avoiding the establishment of any plant rates in excess of those generally prevailing in the area. These 'area prevailing rates' are determined by a series of mathematical computations in which rates of the same classification of various employers are combined to determine a 'weighted average' rate. The order defines the procedure of computation clearly, but the result of the computation cannot be checked unless the various rates of employers and the numbers of employes in each case are known.

"If an employer represents to his employes that he has complied with the order in good faith, employes who may be disappointed in the benefits received will save themselves, their employe organizations, the Petroleum Labor Policy Board and all compliance agencies a great amount of needless effort if they will go directly to their employer and request an explanation of the manner in which their adjustments were computed. If, after receipt of such explanation and a careful study of the context of the interpretations of September 26, 1934, they are convinced that a complaint is warranted, they may then more properly report the matter to the Petroleum Labor Policy Board, reciting all of the pertinent facts."

SETTLE SUN CASES

TORONTO, Ontario, Dec. 1.—After a hearing lasting seven days before Justice Henderson, a settlement was reached in the action brought by the Sun Oil Co., Ltd., against the Sun Oil Co., Brantford, Ltd., the Sun Oil Co., Simcoe, Ltd., and John I. Miller, president.

The plaintiff company, which is a Canadian incorporation of the Sun Oil Co., New Jersey, uses the trade name "Sunoco" and the colors of blue and yellow on its pumps and buildings. The action was to restrain the Ontario companies from using the word "Sun" or the colors. The plaintiff company asked for $10,000 damages as well. Mr. Miller claimed he had a prior right to the word "Sun" on the ground that he had used it before the plaintiff company was incorporated in Canada.

By the terms of the settlement, in consideration of $22,500 plus $2,500 for costs of the action, the Miller companies agree not to use the word "Sun" as part of the corporate name and not to use the color blue, alone or with yellow, on their pumps or buildings; but this shall not apply to the color of the gasoline.

DEEP ROCK SALES CHANGES

B. L. Majewski, of the Deep Rock Oil Corp., Chicago, recently announced the appointment of W. J. Carthaus as general sales manager. Two assistant general sales managers were also appointed. They are W. M. Murray, in charge of lubricating oil sales, and R. J. Kelly, in charge of distributing divisions.

A. A. A. Test Proves High Lubricating Value of W-Grade Winter Oils

By A. LUDLOW CLAYDEN
Sun Oil Co.

In campaigning for the use of light oils, automobile manufacturers have been well supported by refiners, but both have encountered considerable sales resistance due mainly to a fear on the part of motorists and automobile mechanics that light oils would not furnish safe lubrication. In order to prove that a good 20-W oil has a tremendous factor of safety, the Sun Oil Co. has just completed a spectacular demonstration.

A new Chevrolet car with certain quite minor engine modifications was driven 5,000 miles on the road at an average speed of 42 miles an hour, the entire distance being covered on the original 5-quart charge of Sunoco 20-W oil. At the conclusion of the run an examination of the engine parts showed less than normal wear for the distance traveled. Enough oil remained so that the run could have been continued for several hundred miles more and the drained oil was in better condition than would be expected after 1,000 miles of ordinary use, let alone 5,000.

When first purchased, the car was turned over to Cotton Henning of Indianapolis who ran it on the Speedway 1,500 miles at low speed to give it a thorough and gentle "limbering up." The pistons were then withdrawn, fitted with special rings (on each piston two No. 70 and one No. 80 Perfect Circle). The oil pan flange was stiffened by welding on a light angle and all gaskets were replaced with new ones, put on with shellac. Further runs on the Speedway disclosed a few small leaks, which were corrected, and it was also found that some oil escaped through the breather pipe, which, in the 1934 Chevrolet, is combined with the crankcase ventilator. As there was no simple method of overcoming this, a new straight breather pipe was fitted. This cured the last small leak.

The car was then turned over to Louis Chevrolet, the famous race driver and engineer, and the originator of the Chevrolet car, who drove it from Indianapolis to Philadelphia. The oil consumption on this run indicated that the 5,000-mile test would be easily possible. The Contest Board sanction was obtained from the American Automobile Association, and Louis Chevrolet set out with the A.A.A. observer to cover 5,000 miles over a variety of roads at an average speed as near as possible to 40 miles an hour. The test was conducted in normal fall weather and covered territory extending north to Detroit, west to Indiana and south to Miami, Fla.

The 5,000 miles was completed in 12 days—the greatest distance covered in any one day being 537 miles. The lowest average speed for a day's run was 36.4 miles per hour and the highest 46.6. It is interesting to note that the longest day was also the day of highest average speed and was run from Ocala, Fla., to Whyteville, N. C., in quite warm weather.

Sunoco Motor Oil 20-W was used, being purchased in three 1-gallon cans at three different service stations by H. H. Allen, observer for the A.A.A. Mr. Allen blended the contents of the three cans and measured out five quarts, the normal full charge for a Chevrolet engine, the exact quantity introduced being checked by weight. After filling the crankcase, seals were applied to the breather and bayonet gauge.

The object of the run was not to demonstrate the extraordinarily high oil mileage obtainable by a few minor mechanical changes, but was to demonstrate the fact that a light winter oil, Sunoco 20-W, was capable of providing perfect lubrication even when the oil was in use for a much longer time than it could possibly be in a normal engine. While 42 miles an hour is not a high speed, it is quite a high average for any such distance as 5,000 miles, and since the total driving time included crossing many cities and traversing a fair amount of poor road, it means that most of the 5,000 miles was driven at 50 miles an hour. Thus the test was considerably more severe than would have been a similar distance driven on a speedway where the maximum speed would not have had to exceed the average speed. In any engine, oil consumption at 50 miles an hour or over is considerably greater than it is at 40 miles an hour, also the engine temperatures are a good deal higher, which means that the oil is subjected to more severe conditions.

After the run, the cylinder head was removed, the oil pan dropped, a piston and connecting rod removed and the cap of the center main bearing. The connecting rod and the main bearing were not even fully "bedded" in, the original reamer marks being visible in many places. The cylinder head and the piston heads were almost completely free from

(Continued on Page 46)

Naph-Sol Acquires Ogemaw Field Gathering System

MUSKEGON, Mich., Dec. 3.—Naph-Sol Refining Co., of North Muskegon, has purchased the former Pure Oil Pipe Line Co. gathering system in the Ogemaw County oil field at a reported price of $9,000. The system includes about 5 miles of 2, 3 and 4-inch pipe lines leading from producing wells in the vicinity of West Branch to the Michigan Central Railroad tracks where a loading rack is located.

The Naph-Sol company on November 28 posted a price of 86 cents a barrel, or 16 cents under the present posted price of $1.02 for other central Michigan crudes. The lower price corresponds with the amount being paid for Ogemaw crude by the Simrall Pipe Line Co., operators of another short line in the field for the Roosevelt Refining Co.

Ogemaw crude will be shipped to the North Muskegon plant by rail by the Michigan Central and Pere Marquette with operations of the line expected to start today, it was stated by Naph-Sol officials. Producers have about 10,000 bbls. in storage on their leases to be run immediately.

Available production in addition to the Theodore Oil Co. crude run by the Simrall company is now estimated at 300 bbls. although it is expected to be considerably more with the completion of several wells drilled into the Dundee or upper Traverse pay sands but shut in for lack of an outlet. This includes a well drilled in recently by the Muskegon Development Co. Walter E. Anderson is president of the Naph-Sol Refining Co.

Increase in Motor Vessels Revealed in Marine Report

An increase in the number of merchant motor vessels registered in the American merchant marine and a decrease in the number of steam vessels is indicated in the current records of the statistical section of the Bureau of Navigation and Steamboat Inspection of the Commerce Department, according to information made public today by J. B. Weaver, director.

In the 10-year period ending June 30, 1934, the number of motor vessels increased from 11,014 to 13,003, or approximately 18 per cent. In the same period, the number of steam vessels decreased from 7,736 to 5,332, or about 31 per cent.

Among the steam vessels for the same period, coal burning types decreased from 5,966 to 3,340, but oil burners increased from 1,768 to 1,966 vessels. Vessels of electric drive increased from 2 in 1924 to 26 at the end of June 30, 1934. None of the electric drive vessels burn coal. In the motor classification, the gas-engine class fell from 10,559 vessels in 1924 to 9,183 10 years later, while oil-engine types increased from 439 to 3,749 vessels, and electric-screw vessels increased from 16 to 71 during the same period, the official records show.

For the fiscal year ending June 30, 1934, there was shown a slight increase in the total number of vessels equipped as tankers and registered in the American merchant marine with a decrease in tonnage. There were 751 vessels of 2,673,707 gross tons in the tanking service on June 30, 1934, compared to 727 vessels of this type comprising 2,676,966 gross tons on June 30, 1933, an increase of 24 vessels and a decrease in tonnage of 3,259, official statistics show.

SUPPLIES NEW CANADIAN DEPOT

PORT STANLEY, Ontario, Dec. 1.—The first shipment of nearly 1,000,000 gallons of gasoline and fuel oil was delivered by tanker this week to the recently completed storage depot of Thayer Petroleum Corp., Ltd., here. The company, whose head office and central distributing point for western Ontario is at London, had previously secured its supplies by rail; but recently arrangements were made for handling petroleum products by tanker to Port Stanley, with transshipment to London by L.&P.S. electric railway.

The plant includes two 1,250,000-gallon steel tanks, 72 feet in diameter and 40 feet high. The gasoline tank has a floating roof to prevent evaporation, an engineering innovation in this district. The plant is served by two 2,600-foot 8-inch pipe lines with pumping house, a loading platform and a railroad siding. A warehouse for motor oil storage, offices and two additional storage tanks will be built. Gordon Cole has been appointed gauger and operator of the plant, assisted by H. A. Hook, oil engineer. Inauguration of the plant was witnessed by J. A. Thayer, president, Murray McPherson, sales manager and F. G. McAlister, director of the Thayer company, as well as by railroad and municipal officials.

FUEL FROM PEAT

Dispatches from Russia carry the statement that a process has been originated there which permits the recovery of a motor fuel from peat which can be produced more cheaply than gasoline. This is of particular importance to Russia is as much as the Leningrad area is credited with holding 2,000,000,000 tons of peat.

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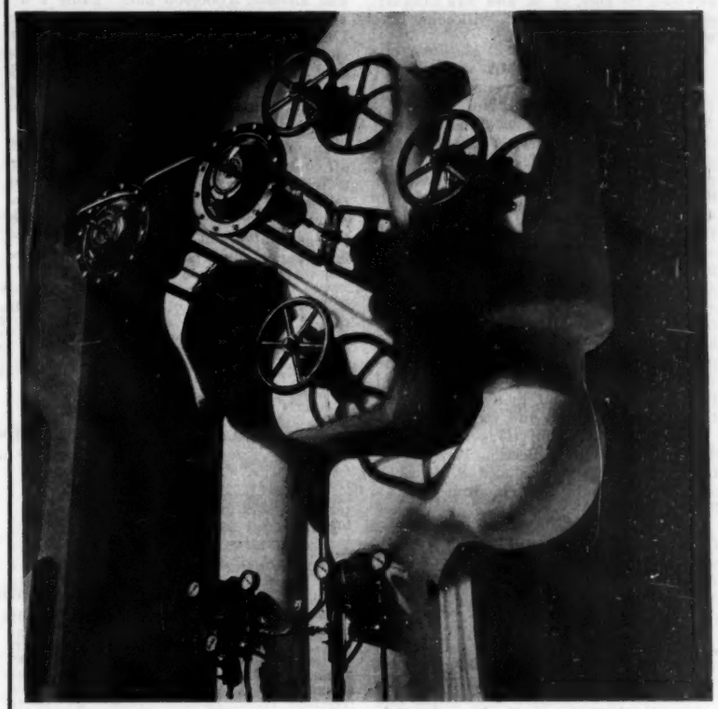

This photograph shows Taylor Instruments for cooling-liquid temperature and return pressure control. Both are installed in the refrigeration room of the Hoffman Beverage Company's brewery.

Essential industries today provide the accurate, efficient and economical control so vital to product quality and low cost operation—with Taylor Instruments.

NEVER before in the history of industry has the need for *precise temperature control* been so vital. And now manufacturers are taking greater steps to provide themselves with this protection.

For example, take the Hoffman Beverage Company's new brewery in Newark, N. J., which was designed to contain only the most modern equipment. Here the Nathan System of brewing is in operation, the first installation of its kind in the country. With this system it is especially important to have complete and accurate temperature control. And Taylor Instruments work day and night throughout the entire system.

The oil industry is one of the important users of Taylor Control. There, as in all essential industries, a Taylor System is vital in helping to speed up production, decrease errors, and maintain the high quality of your product. Whether your problem is one of temperature, pressure or flow control, Taylor engineers can design an efficient and economical system to meet your peculiar needs.

Are you getting the full benefits from temperature control in your plant? At your request, Taylor will send a representative to make a survey of your present instrument set-up, and make helpful suggestions as to your possible needs. *Now is the time to know those needs.*

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Late Fields

EAST TEXAS

FORT WORTH, Tex., Dec. 4.—Gulf Production Co.'s No. 1 Davey and Royall, new Anderson County gas discovery, made drill stem test at total depth of 5,185 feet but showed nothing but 800 feet of mud. It is coring deeper.

KANSAS

Aylward and others' No. 1, C SE SE NE Section 28-13-14w, Russell County, Kansas, found Siliceous lime at 3,271-78 feet and a hole filled with oil. It swabbed 150 bbls. for three hours without lowering the fluid level. The well will be tubed and put on the pump for a test.

Texas Co.'s No. 1, C NE SE NE Section 23-14-15w, Russell County, had Siliceous lime pay at 3,253-55 feet. It swabbed 90 bbls. of oil and was exhausted. It will be acidized. Siliceous lime was topped at 3,244 feet.

OKLAHOMA

Higgins & Kruger deepened a Bartlesville sand producing well, No. 15, in SW NE SW SE Section 25-23-8, Hominy district, Osage County, Oklahoma, and got a surprise. It was originally completed at 2,039-57 feet, starting at 125 bbls. of oil, with a little water. The well was deepened to 2,069 feet and the hole filled with water and could not be swabbed down. Then it was deepened to 2,072½ feet where there was an increase of oil. The hole was swabbed five and one-half hours when it began to flow and for 17 hours flowed at the rate of 3,000 bbls. of oil per day, with an accompaniment of a like quantity of water. The well was "killed" with water pumped into it and then shut in awaiting facilities to handle the oil and water.

Magnolia Petroleum Co.'s No. 2 Jordan, C NW NE SW Section 12-7-4, Pottawatomie County, produced 8,144 bbls. of oil in 48 hours from Hunton lime at 3,804-4,010 feet.

Phillips Petroleum Co.'s No. 1 Osborne, C NW SE NE Section 5-10-4, Pottawatomie County, had Earlsboro sand at 4,414-55½ feet, total depth, and swabbed 389 bbls. the first 14 hours and 327 bbls. in the following 14 hours.

Texas Asks Ickes for 1,000,000 Bbls. to Export

WASHINGTON, D. C., Dec. 4.—Col. E. O. Thompson of the Texas Railroad Commission has presented to the petroleum administration a request that the allowable crude production for Texas be increased a total of 1,000,000 bbls. for the months of December and January to allow the production of that amount of crude for export.

Colonel Thompson stated the oil was for export to England and would be sold for $1.20 per barrel laid down at the Gulf Coast. It would be produced from the East Texas Field at the rate of 30,000 bbls. daily, and would be spread among several operators. Apparently, he said, the offer was bona fide as it had been carefully checked by the commission and a report had been obtained as to the standing of the British firm.

Petroleum administration officials refused to comment on the subject and would make no statement regarding the likelihood of approval of this request.

Barks, Williams & Co., Ltd., the firm reported to be in the market for 2,000,000 bbls. of oil, has offices at Coronation House, 4, Lloyd's Avenue, London, E.C. 3. The directors are T. L. Barks and F. A. Williams; P. E. May is secretary. The company was registered March 24, 1932, to carry on business as dealers in oil, bulk oil importers, freight brokers and tank chartering agents. Its capital is given as £10,000 in £1 shares.

FREDERICK MURRAY MARRIES

Frederick F. Murray, vice president of Oil Well Supply Co., was married on December 1 in Newark, N. J., to Miss Dorothy Schraft. Mr. and Mrs. Murray sailed the same day for South America on the Steamship "Southern Prince," and will return about the middle of January.

World Motor Fuel Consumption Estimates Indicate the Possibilities of Expansion

By V. R. GARFIAS and R. V. WHETSEL

Foreign Oil Department, H. L. Doherty & Co.

Preliminary figures indicate that the world consumption of motor fuel will reach a new peak in 1934, the term motor fuel including gasoline produced from petroleum, natural gasoline, and benzol and alcohol utilized as motor fuel in mixtures with gasoline. The approximate distribution of these products in 1933 was as follows: Refinery gasoline, 489,158,000 bbls.; natural gasoline, 40,500,000 bbls.; benzol, 6,500,000 bbls.; and alcohol, 3,000,000 bbls. Table 1 divides world consumption between the United States and other countries; it shows that consumption in countries outside of the United States has maintained an almost steadily rising trend during the past five years, despite world-wide depression.

In order further to analyze the trend of consumption, the world markets for motor fuels have been grouped into the following five zones: North American zone, including Alaska, Canada, the United States and Mexico; South American zone, comprising South and Central America, Cuba and the West Indies; European zone, including Europe, all Russia (Siberia) and Turkey; Asiatic zone, including all Asia, except Siberia, Australia, New Zealand, Hawaii and Pacific Islands; and African zone, including continental Africa, Madagascar and Canary Islands.

The consumption per capita in the various zones is shown in Table 3.

TABLE 3—MOTOR FUEL CONSUMPTION PER CAPITA

(In U. S. gallons)

North American zone	111.35
European zone	8.52
South American zone	6.30
African zone	1.76
Asiatic zone	1.04

Table 4 gives consumption for the 40 leading countries from 1930 to 1934, inclusive. Under "others" are included some 74 countries and territories. In the majority of countries actual consumption statistics are not available, making it necessary to estimate such figures from imports, exports and production.

TABLE 1—MOTOR FUEL CONSUMPTION

	United States	Other countries	World total
1930	397,591,000	149,777,000	547,368,000
1931	407,843,000	153,285,000	561,128,000
1932	377,791,000	150,347,000	528,138,000
1933	381,561,000	157,597,000	539,158,000
1934*	400,000,000	168,128,000	568,128,000

*1934 figures estimated.

TABLE 2—MOTOF FUEL CONSUMPTION BY GEOGRAPHIC ZONES

	North American	European	Asiatic	South American	African	World total
1930	416,194,000	90,474,000	21,895,000	12,977,000	5,828,000	547,368,000
1931	425,675,000	95,263,000	21,900,000	13,297,000	5,993,000	561,128,000
1932	395,076,000	95,166,000	20,844,000	11,364,000	5,688,000	528,138,000
1933	397,896,000	101,438,000	21,685,000	11,996,000	6,143,000	539,158,000
1934*	417,835,000	109,099,000	22,300,000	12,594,000	6,300,000	568,128,000

*1934 figures estimated.

TABLE 4—WORLD MOTOR FUEL CONSUMPTION

(Thousands of barrels)

	1930	1931	1932	1933	1934*
United States	397,591	407,843	377,791	381,561	400,000
United Kingdom	29,667	28,437	29,836	32,070	33,800
France	16,517	19,165	19,571	21,268	23,000
Canada	16,940	16,151	15,440	14,435	15,850
Germany	15,349	14,540	12,789	12,373	15,200
Australia	6,428	6,095	5,359	5,724	5,820
Argentina	5,660	5,346	4,835	5,301	5,440
Japan	4,131	5,159	5,234	5,650	5,750
Russia	3,200	5,400	6,800	8,838	9,046
Italy	3,435	3,541	2,915	3,001	3,300
Spain	2,967	3,372	3,122	3,032	3,100
Holland	2,756	3,000	2,891	3,291	3,350
Sweden	2,618	2,785	2,921	2,930	3,070
British India	2,437	2,220	2,389	2,085	2,150
Belgium	1,933	2,139	2,266	2,589	2,873
Denmark	1,942	2,116	1,980	1,840	1,900
Czechoslovakia	1,945	2,301	2,001	1,911	1,890
New Zealand	1,952	1,792	1,669	1,590	1,680
Union South Africa	1,867	1,913	1,901	2,149	2,200
Brazil	1,821	1,822	1,790	1,820	1,850
Dutch East Indies	1,867	1,798	1,687	1,500	1,520
Mexico	1,492	1,527	1,724	1,765	1,840
Switzerland	1,350	1,560	1,736	1,661	1,730
Austria	1,224	1,158	840	848	870
Algeria	1,020	1,060	930	1,138	1,050
Irish Free State	926	1,170	1,110	1,101	1,180
Hawaii	890	869	905	909	920
British Malay	817	622	508	414	450
Philippine Islands	646	887	759	891	910
Norway	765	849	847	895	910
Rumania	775	760	706	726	770
Chile	882	809	410	520	560
Cuba	810	847	699	504	560
Poland	827	701	643	780	750
China	711	715	675	744	750
Venezuela	844	479	474	507	590
Persia	611	423	461	673	690
Uruguay	612	766	581	590	660
French Morocco	606	560	626	696	710
Finland	595	486	442	511	530
Others	7,942	7,845	7,875	8,327	8,915
Total	547,368	561,128	528,138	539,158	568,128

*1934 figures estimated.

MUCH ADO ABOUT NOTHING

WASHINGTON, D. C., Dec. 3.—The petroleum administration has issued the following order:

"Now, therefore, upon recommendation of the Petroleum Administrative Board, and pursuant to the authority vested in me by the President's order of August 28, 1933, authorized by Section 2 (b) of Title 1 of the National Industrial Recovery Act, and pursuant to the terms of Section 10 (b) of the said act, and Article 1, Section 4 (a) of the code of fair competition for the petroleum industry, it is hereby ordered that subject to conditions (a) and (b) in my order of September 13, 1934, calendars may be distributed at filling or service stations, garages, or other institutions retailing petroleum products during the months of December, 1934, and January, 1935."

APPROVED (Signed)
HAROLD L. ICKES,

Panhandle Refining Increases Its Prices in North Texas Field

Effective December 1 Panhandle Refining Co. posted the prices it will pay for crude oil in North Texas during the month: Below 29 degrees 68 cents; 29-29.9 degrees, 70 cents; with 2 cents added for each degree up to and including 40 and above, at 92 cents.

In its statement to producers the company says:

"Applying the 18.5 ratio, as provided in Section 6, Article 3, of the code of fair competition for the petroleum industry to the average price of U. S. Motogasoline of 60-64 octane rating of 4.8 cents (in November), produces a price of 89 cents for crude oil of 36-36.9 gravity in Oklahoma. The North Texas crude price is 5 cents less, or 84 cents. Applying a 2-cent differential up and down for each degree of gravity produces the following schedule, which will be the prices we will pay for crude oil during the month of December:

	Cents
Below 29 gravity	68
29 to 29.9	70
30 to 30.9	72
31 to 31.9	74
32 to 32.9	76
33 to 33.9	78
34 to 34.9	80
35 to 35.9	82
36 to 36.9	84
37 to 37.9	86
38 to 38.9	88
39 to 39.9	90
40 and above	92

"These prices are 8 cents per barrel higher than the price announced on November 21.

"This schedule is for North Texas and does not apply to oil produced in Gray County."

The Panhandle's new prices are 11 cents per barrel less than other companies are paying in the North Texas fields.

Petroleum Electric Power Club Meets at Houston

BEAUMONT, Tex., Dec. 4.—The sixth annual conference of the Petroleum Electric Power Club opened a three days' program devoted to the use of electric power by the petroleum industry. Representatives not only of the various power utility companies and manufacturers of power equipment but also of the production, pipe line and refining branches of oil interests attended. This meeting, as expressed by D. C. McKee, Empire District Electric Co., Joplin, Mo., will have as its particular purpose the study of the power needs of the oil companies so that the power utilities will be better able to co-ordinate their efforts to co-operate with and serve the oil industry.

The conference was called to order by W. H. Stueve, of the Oklahoma Gas & Electric Co., chairman of the club. T. P. Walker, president of the Gulf States Utilities Co., Beaumont, delivered an address of welcome, responded to by Mr. McKee and by J. H. Russell, assistant to the vice president of the Gulf Production Co., Houston, the latter in a message from oil companies. Representatives of the operating ends of the oil industry, production, refining and pipe line, occupy a prominent place on the program.

WIRT FRANKLIN'S POSITION

Owing to conflicting reports purporting to state the views of President Wirt Franklin of the Independent Petroleum Association of America, Mr. Franklin emphatically states that the Independent Petroleum Association of America has never at any time favored Federal control of the oil industry or of any branch of the oil industry, and its program only included such limited legislation as it was felt is essential to bring about a balance between supply, consisting of the three elements of imports, withdrawals from storage and domestic production, with demand.

Study of Cost Data for Pumping Equipment Discloses Useful Facts

By S. F. SHAW
Consulting Engineer

Selection of pumping equipment for lifting oil has followed a line of development that depended largely on the depth of the well. Early wells were shallow wells, and the methods employed were necessarily adapted to lifting from shallow depths. In shallow wells, natural flow ceases at an early stage, as a rule, after which the methods of production employed are usually those of bailing, swabbing, pumping with central powers, and pumping "on the beam." The choice of method depends largely on the conditions that prevail.

Bailing and swabbing operations are expensive, and usually are employed only until decision can be reached on the choice of some more permanent method. At Baicoi, Rumania, bailing was employed for several years for lifting the oil which was accompanied by much fine, loose sand from depths of 1,500 to 3,000 feet. Swabbing has been employed in Poland for several years in the Borysław Field at depths up to 4,000 feet, or more. These are, however, exceptional cases.

When wells in shallow fields decline in production, it becomes necessary to reduce the lifting expense to a minimum and the use of central powers for handling pumping jacks is found to be of advantage over many other methods.

Following the development of shallow fields, wells have reached to greater depths, resulting in larger wells being completed. Wells of greater capacity require methods capable of handling greater production, especially when market requirements demand more oil. For handling deeper production the individual pumping unit has been found to possess several advantages over the central power, as it has greater capacity, and can be employed for repairing and reconditioning the well.

Cost of Central Power

The cost of equipping a group of 21 wells with a complete installation for central power, provided with 40-horsepower gas engine, is estimated by Suman at $1,553, or $380 per well. Assuming that the production handled in this instance was between 10 and 25 bbls. per well per day, the installation cost ranged between $38 and $15.20 per barrel lifted per day.

Heavy-duty central powers are being installed for handling wells on pumping jacks in the East Texas Field at a depth of about 3,600 feet and the cost for equipping a lease with several wells averages about $2,000 per well. Pumping jacks operated by these central powers in the East Texas Field can, perhaps, handle as much as 100 bbls. per day while fluid levels are fairly high, on which basis the equipment cost is $20 per barrel lifted per day. The allowable production is about 35 bbls. per day, however, and the equipment cost on this basis is $55.50 per barrel of oil lifted per day.

Cost of Beam Pumping

Midway-Sunset Field, California—The cost of equipping a well on the beam with 30-horsepower gas engine in the Midway-Sunset Field, California, is given by Uren as $2,514.75. The items included do not mention the pumping barrel, sucker rods, rig front, or building. The depth of the wells is from 1,500 to 2,500 feet, and the wells produce from 15 to 200 bbls. per day. Assuming the average production to be 100 bbls. per day per well, the cost of the equipment included in this estimate is approximately $25 per barrel lifted per day.

COST OF BEAM PUMPING INSTALLATIONS IN THE SEMINOLE FIELD—1927-1930

Kind of equipment—	Approximate cost	Barrels per day	Cost per bbl. of daily production
Wood rig front, bandwheel, used gas engine	$4,000	300	$13.30
Estimate as per reference	5,551	300	18.50
Steel rig front, geared pumping unit driven by electric motor	7,500	300	25.00
Steel front, geared pumping unit, driven by 40-horsepower gas engine	8,500	300	28.30

ESTIMATED COST OF BEAM-PUMPING EQUIPMENT IN THE EAST TEXAS FIELD, 1933-34

Kind of equipment—	Approximate cost	Bbls. lifted per day	Cost per bbl. of daily production
Wood rig front, bandwheel, 25-horsepower gas engine, used equipment	$3,000	*300	$10.00
	3,000	† 35	85.50
Wood rig front, bandwheel, 30-horsepower gas engine new equipment	4,500	*400	11.25
	4,500	† 35	128.60
Steel front, geared reduction unit, driven by 30-horsepower gas engine	6,000	*500	12.00
	6,000	† 35	171.40

*These figures in the table refer to the probable production that could be made when wells are first placed on the beam, if the wells were produced at the capacity of the pump.
†These figures refer to the daily allowable at the present time.

Wortham, Tex.—In the Wortham Field, Texas, after a well had been completed and after natural flow had ceased, the cost of additional equipment for handling the production on the beam was about as follows:

2,900 ft. 2⅛-in. plain tubing	$987.60
2½-in. barrel and plunger	102.00
¾-in. sucker rods, 2,900 ft.	313.09
Polish rod, fittings, 6⅝-in. casing head, etc.	50.00
Gas engine, 35-horsepower	1,547.42
Belt, foundation for engine, labor, teaming, etc.	350.00
Total	$3,350.11

This estimate does not include the bull wheel, band wheel, walking beam or engine house which would be left on the well after being completed with standard tools.

Assuming that the wells in the Wortham Field would average 200 bbls. per day at the time they were placed on the beam, the installation cost on basis of $3,350.11 would be $16.75 per barrel lifted per day.

Gulf Coast—The average cost of installing beam-pumping units in wells at depth of 3,000 to 4,000 feet on the Gulf Coast was approximately $9,000. The equipment consisted of a geared reduction unit, electric motor, steel front, concrete foundations and steel derrick. This unit could probably handle from 300 to 500 bbls. per day, making for an installation cost of $18 to $30 per barrel lifted per day.

Seminole, Okla.—The average production of wells when placed on the beam in the Seminole Field was 300 bbls. or less per day. In a few instances in the early life of this field as much as 600 bbls. were lifted per day. Probably 300 bbls. per well is somewhat greater, rather than less, than the average when wells were first placed on the beam.

Wood fronts have been installed in the Seminole Field in considerable numbers, but the depth of the wells and length of life is such that it would probably have been advisable to install steel fronts throughout. Forty horsepower gas engines were used in a considerable number of cases. Also 25-horsepower gas engines were used in many cases, but repair items were found to be heavy, owing to the fact that these engines were used for pulling tubing and for other work at the wells rather than using portable outfits for this purpose.

The initial investment for pumping equipment in a well in the Seminole Field was as follows:

40-horsepower gas engine	$1,044
Clutch	627
Belt and engine house	700
Concrete foundations and floor	300
250-bbl. water circulating tank	165
Beam hanger, belts, valves and fittings	336
4,400 ft. 2⅛-in. upset tubing	1,628
4,400 ft. ¾-in. heat treated sucker rods	486
Working barrel	115
Grasshopper counterbalance	150
Total	$5,551

In the above estimate mention is not made of bandwheel, and rig front, therefore it is assumed that this part of the equipment was left at the well after the well was completed.

Probably less expensive installations of euqipment were made in the Seminole Field than that mentioned, by moving in a gas engine that had been employed in some other field, and using such second-hand equipment as might be available. Such installations amounted to about $4,000 per well.

Oklahoma City, Okla.—Practically all of the wells that have been placed on the beam in the Oklahoma City Field have been provided with heavy steel front, latest type of geared reduction unit driven by gas engine ranging from 60 to 100 horsepower. This makes for an expensive but substantial installation which is probably required in wells having depth of 6,500 feet and where considerable water must eventually be handled.

The beam pumping installations in the Oklahoma City Field, not including derrick or tubing, are costing from $10,000 to $11,000, and on basis of handling 200 bbls. per day the cost for equipment would be approximately $50 per barrel lifted per day. Perhaps the estimated average production of 200 bbls. lifted per day when wells are first placed on the beam in this field is somewhat high, although instances are already known where this quantity is being lifted.

Less expensive installations, employing partly used equipment have been set up for $6,000 to $7,500 but the quantity handled over a month's run has seldom averaged more than 100 bbls. per day, thus making for an installation cost of $60 to $75 per barrel lifted per day.

East Texas—The operators in the East Texas Field have found it necessary to hold the expenditures for installing equipment to a minimum under the severely restricted production applying in this field, and under these conditions it is not surprising that wood fronts and gas engines of small horsepower have been installed in a large number of cases. Probably these installations will need to be renovated later when water encroachment takes place, for they will almost certainly be unable to service the wells up to the time when the wells are ready to be abandoned.

If the operator in the East Texas Field has a well equipped with a beam pumping unit in the immediate neighborhood of another well, he can handle this additional well with power take-off, thereby reducing the installation cost per barrel to nearly one-half that indicated where the production is on a restricted basis. Instances of two power take-offs from a pumping unit are known in the East Texas Field.

Typical pumping installation in East Texas field of the steel rig front type

Summary of Recent Research Work Upon Organic Content of Sediments

By PARKER D. TRASK[1] and HARALD E. HAMMAR[2]

(Continued from Issue of November 29)

Texas

Most of the samples that were obtained from Texas come from the East Texas oil field and the East Texas basin. In addition, samples were procured from two wells in the western part of the state—one from the Yates area, and the other from the Big Lake field; and from four wells in the southern part of the Gulf Coast area—from Duval, Bee, and Victoria Counties, and from the Racoon Bend oil field. As it has not yet been possible to complete the program of analyses of the samples collected from Texas, the data presented should be considered as tentative, and as indicating only the general order of magnitude.

East Texas Basin: In the vicinity of the East Texas oil field, on the east side of the East Texas basin, the shale in the Wilcox group (Eocene) contains about 2 per cent organic matter; and in the underlying Midway group (Eocene), about 1.5 per cent. The Cretaceous formations in the East Texas basin, in general, contain about 1.5 per cent organic matter. The Navarro formation at the top of the Cretaceous in the East Texas and Van oil fields has an organic content of about 1.5 per cent. The Taylor marl which underlies the Navarro, as indicated by samples from a few wells scattered throughout the East Texas basin, has an organic content ranging between 1 and 2 per cent. The Austin chalk beneath the Taylor marl contains about 1.5 per cent organic matter in the East Texas basin; but southwest of the basin, in Caldwell County, it seems to have more than 2 per cent.

As the Eagle Ford shale or clay which underlies the Austin chalk has been considered favorably by a number of people as a source of oil, a preliminary map of the distribution of organic matter in the upper and lower part of the formation was prepared (Figure 3). On this map the organic content has been estimated to the nearest 0.5 per cent. In addition, the relative volatility of the sediments has been indicated in three grades, which are based on the coefficient of volatility. The coefficient of volatility is the assay number divided by the carbon content.[3] In the recent sediments the average is 2.4. In ancient sediments the average has not yet been calculated, but it seems to be somewhat less than 2.4. Accordingly, in the preparation of Figure 3, sediments in which the coefficient of volatility was 1.2, or less, have been considered as of low volatility; between 1.2 and 2.4, as of medium volatility; and greater than 2.4, as of high volatility.

The organic contents of the upper and lower parts of the Eagle Ford are similar, but the lower part seems to be slightly richer than the upper—especially in the southwest part of the East Texas basin. The volatility of the lower part of the formation is distinctly greater than that of the upper part. The sediments around the border of the basin on the north, east, and southeast—presumably near the old shore line—contain about 1.5 per cent organic matter, and have a comparatively low volatility. The maximum organic content of both the lower and upper parts of the formation seems to be in the southwest part of the basin in the vicinity of the fault-line fields between Corsicana and Mexia, where the organic content is about 3 per cent. The lower part of the formation, however, may become richer farther southwest, as indicated by the analyses of samples from wells southwest of the area shown in Figure 3. The organic content of both parts of the formation decreases north of Corsicana, being about 2 per cent near Terrell.

The volatility of the formation is greater in the west part of the basin than in the east; it is greater in the south part than in the north part; and it is greater in the lower part of the formation than in the upper part. The maximum volatility of both parts of the formation is near Mexia. South and west of Mexia the volatility of the upper part of the formation decreases very distinctly, but in the lower part it does not.

The Woodbine formation, which underlies the Eagle Ford shale, consists essentially of sand: but in places it contains considerable shale. Like the Eagle Ford, it thickens westward from the East Texas oil field. In the East Texas field, the shale in the Woodbine formation has an average organic content of slightly more than 1 per cent; but in the fault-line fields to the west it contains more than 2 per cent, and west and north of the fault-line fields it contains less than 2 per cent.

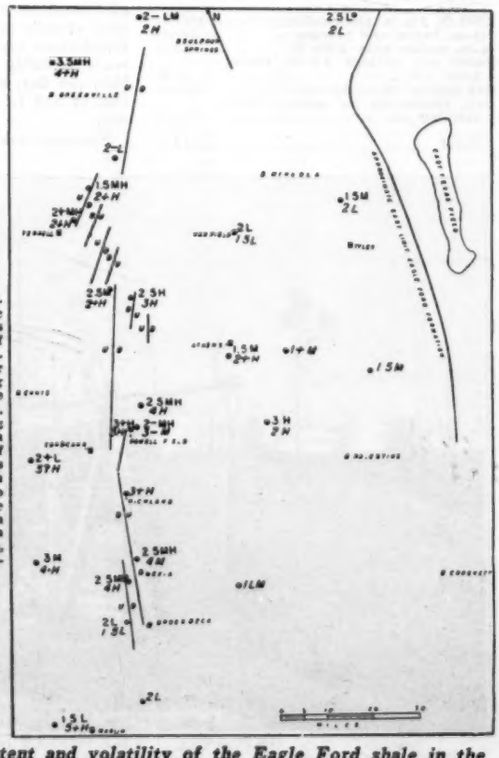
The shale in the Washita group beneath the Woodbine sand, in general, contains less than 1.5 per cent organic matter; and the limestone in the Washita group possesses less than 1 per cent. The shale correlated with the Fredericksburg group (beneath the Washita) in a well in Upshur County, northwest of the East Texas field, has an organic content of 1.5 per cent. One sample of limestone from the Fredericksburg, on the west side of the East Texas basin, contains less than 0.5 per cent organic matter. The Glen Rose limestone, which underlies the Fredericksburg, in the well from Upshur County contains slightly less than 1 per cent organic matter.

West Texas: Samples from a well in the Yates area in West Texas contain less than 1 per cent organic matter throughout the entire 1,300 feet of its depth. However, some brown sandstone and dolomite in the lower 100 feet contain about 2 per cent which, in part, may represent oily material that migrated into the sediments.

On the north side of the Big Lake oil field in west central Texas 1,500 feet of undifferentiated Pennsylvanian shale and limestone above the Ellenburger limestone have an organic content ranging from 2 to 5 per cent, the quantity in general decreasing downward. The Ellenburger limestone (late Cambrian and early Ordovician) contains less than 1 per cent organic matter—except for 200 feet of sediments in the upper part, which contain more than 3 per cent. The large quantity of organic matter in this zone, to some extent, may be due to substances that migrated into it; as the samples were not extracted with carbon tetrachloride before they were analyzed.

Gulf Coast: In the Gulf Coast region of south Texas the organic content of the upper 900 feet of Eocene strata in the Racoon Bend oil field, 100 miles west of Houston, is 1.5 to 2 per cent. In a well in Victoria County, 100 miles southwest, the organic content of 6,000 feet of strata, ranging in age from Pliocene to lower Oligocene, is less than 1 per cent; in fact, mostly less than 0.5 per cent. In a well in Bee County, about 50 miles southwest of the well in Victoria County, a similar thickness of beds of the same age has an equally low organic content. In both wells some Oligocene (?) shale, overlying the Frio clay, is the richest part of the sediments encountered; but even in this shale the organic content is only slightly more than 1 per cent in the well from Bee County, and a little less than 1 per cent in the well to the north in Victoria County.

In a well in Duval County, 100 miles southwest of Bee County, the organic content of the lower 1,000 feet of Oligocene (?) and the upper 2,000 feet of Eocene strata, in general, is less than 1 per cent. In this well the Eocene beds from a short distance above the Saline Bayou member of Ellisor to the bottom of the Weches green sand member of the Mount Selman formation contain 1.5 to 2 per cent organic matter; the Queen City sand member of the Mount Selman formation consists essentially of sand, and has an organic content of less than 1 per cent—although some of the shale in it contains more than 2 per cent organic matter: and the Reklaw member of the Mount Selman formation has an organic content ranging from 2 per cent in the upper part to nearly 3 per cent in the lower part.



Numbers refer to approximate per cent of organic matter. Straight numbers represent the upper part of the Eagle Ford shale, inclined numbers the lower part. The letters following the numbers represent the volatility of the sediments. L indicates low volatility; M medium; and H high volatility. Combinations of two letters represent places where the volatility is on the boundary between two groups. The lines in the west part of the basin represent faults (location according to Plummer). D, down-thrown side; U, up-thrown side.

Fig. 3—Organic content and volatility of the Eagle Ford shale in the East Texas Basin

Relation of Organic Content to Occurrence of Oil

It has not yet been possible to study the relation of the organic content of sediments to the occurrence of oil. Consequently, this phase of the problem cannot be discussed to much advantage in this paper. A few points, however, seem worthy of mention. The generally low organic content of ancient sediments, even of those associated with oil horizons, suggests strongly that a large concentration quently, in these areas it is evident that factors other than the organic content have to be considered.

Petroleum consists essentially of compounds that are comparatively volatile and in a state of considerable reduction. Consequently, sediments possessing the same characteristics presumably should be favorable source beds. The relative volatility or state of reduction (i.e., lack of oxidation) have not yet been investigated in detail by the present project on source beds, but some of the results that have been obtained favor the concept that sediments of comparatively high volatility or high state of reduction may be favorable source beds. The data are sufficiently encouraging to warrant the intensive study of the relation of the occurrence of oil to these two characteristics of sediments, and this is the next subject to be undertaken by the project.

Another question that should be considered is the case of migration of oil out of the source beds into the reservoir rocks. As a general rule, the coarser the sediments, the greater is the permeability and the more readily the oil may migrate out of the place where it originates. Consequently, the presence of sand particles in sediments should favor the migration of oil and increase the effectiveness of the sediments as source beds.

Relation of Organic Content to Environment

The organic content of sediments generally is greater near the shore than it is in pelagic regions, a considerable dis-

[1] U. S. Geological Survey, Washington, D. C. Authors' title: "Organic Content of Sediments."

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[3] P. D. Trask, op. cit., p. 27-8.

tance from shore. The areas of maximum organic content usually are a few miles or tens of miles off shore, and are separated from the coast by a zone in which the organic content more or less gradually decreases toward the shore (Figure 2). Irregularities and depressions in the sea floor favor the trapping of the organic constituents, and the maximum organic content is apt to occur in basins fairly close to shore.[11] If the rate of deposition of coarse and fine particles varies with respect to time, i.e., if the sediments consist of alternating layers of sand and shale (as in the Los Angeles basin) the fine sediments—the clays—afford good opportunity for the accumulation of organic matter which can generate oil, and the coarse sediments—the sands—offer favorable channels for the transfer of the oil from the source beds to the reservoir where it accumulates.

A relationship of this type may account for the greater yield of oil from the Frontier formation in Wyoming than from some of the other Cretaceous formations, which have an organic content equally as rich or richer than the Frontier formation. The Frontier contains a comparatively large proportion of coarse particles, and the area in which the organic content is greatest presumably lies east of the Salt Creek oil field. Such conditions, aside from the structural relations, should favor the accumulation of the large quantity of oil in the Frontier formation in the Salt Creek field.

The lateral changes in organic content of the sediments, as indicated by Figures 1 to 3, in general, are gradual and uniform—especially in areas of relatively little diastrophism. The Cretaceous sediments in Wyoming and the East Texas basin which, as indicated by the lithologic character of the sediments, seem to have been associated with comparatively little diastrophism at time of deposition, change laterally in organic content in a fairly gradual and uniform way. The Pliocene and Miocene sediments in the Los Angeles basin, as indicated by the alternating character of the sediments, presumably were affected to a considerable extent by diastrophism at time of deposition. The organic content of these sediments varies considerably in different parts of the basin. Both the Pliocene and Miocene sediments double in organic content within 15 miles between the north and south parts of the basin, and the lower part of the Miocene increases from 5 to 13 per cent within a similar distance on the west side of the basin. In other words, data presented in this paper favor the hypothesis that sediments deposited in areas of active diastrophism are apt to vary significantly in organic content within a few miles, but sediments deposited in areas of comparatively little diastrophism are likely to change in organic content slowly and fairly uniformly from one area to another.

Summary

This paper is essentially a progress report which presents data about the distribution of organic matter among sediments from several oil producing areas in California, Wyoming, Colorado, Montana, Kansas, Oklahoma and Texas. The report explains briefly the methods of determining the organic content of sediments; and one method, that of ascertaining the degree of oxidation by means of chromic acid, is described in detail.

Sediments, in general, contain little organic matter. The average organic content is about 1.5 per cent, and relatively few sediments contain more than 4 per cent. The scarcity of sediments containing more than 4 per cent organic matter indicates that a large content of organic matter is not required for the generation of petroleum in commercial quantity, even in consideration of the fact that the organic content of the sediments is less now than at time of deposition. However, the association of so many oil horizons with sediments, like the Miocene of California, the upper Cretaceous of Wyoming, the Cherokee shale and Chattanooga shale in Oklahoma, and the Eagle Ford shale in Texas, which contain considerably more organic matter than the general average for sediments, indicates that relative richness (but not necessarily extreme richness) is a favorable indication of source beds. On the other hand, the organic content is not an absolute index of source beds; as some rich sediments are not associated with oil horizons, and some oil horizons are of organic matter in sediments is not essential for the development of an oil field. The formations that were studied occur in a large number of oil-producing areas, and some of them most certainly represent source beds of oil. The organic content of very few formations exceeds 4 per cent, and in most of the formations associated with oil horizons it ranges between 2 and 4 per cent. Individual layers, however, are more likely to contain more than 4 per cent organic matter than formations as a whole.

It must be borne in mind, of course, that the organic content of ancient sediments is less now than it was at time of deposition. The question of the loss in organic matter during burial has not yet been considered in detail, but the loss almost certainly is less than 50 per cent. The average organic content of ancient sediments that have been examined is about 1.5 per cent. The average (median) organic content of recent sediments in more than 150 environments of deposition is less than 2.5 per cent[12]. The average for ancient sediments is based on 5,000 and, for recent sediments, on 2,000 analyses. Presumably, this is a sufficient number to indicate at least the proper order of magnitude of the average organic content of the two types of sediments. If the conditions governing the deposition of organic matter in the past were similar to what they are now—and there seems little reason to doubt that they were materially different—it would appear that the loss in organic matter during burial in general is less than 50 per cent.

Consequently, since so many oil horizons are associated with sediments containing from 2 to 4 per cent organic matter, it would seem as if an initial organic content of less than 8 per cent (or even as little as 4 per cent) would in many areas be sufficient for the development of an oil field. An initial organic content of 8 per cent, although relatively large in comparison with the organic content of sediments in general, actually is a small proportion of the total weight of the sediment. Consequently, it seems to follow that a large concentration of organic matter is not essential for the formation of an oil field.

However, it appears evident that an organic content richer than the general average for sediments is a favorable indication of source beds. The sediments in the Miocene in California, the upper Cretaceous in Wyoming and northern Colorado, the Cherokee shale and Chattanooga shale in Oklahoma, and the Eagle Ford shale in Texas have an organic content in excess of 2 per cent, and they are all associated with oil horizons. On the other hand, some very prolific oil horizons, like the Woodbine sand in the East Texas field and the Pliocene sands in the Santa Fe Springs field in California, are associated with sediments that contain 1.5 per cent organic matter or less. In both these fields, however, the organic content of the sediments increases down the dip. At Santa Fe Springs the organic content of the Pliocene sediments, in which the oil occurs, increases from 1.5 to more than 2.5 per cent down the dip toward the southwest; and in the East Texas area the organic content of the shale associated with the Woodbine sand increases to more than 2 per cent down the dip toward the center of the East Texas basin; and the organic content of the Eagle Ford shale which overlies the Woodbine sand increases to more than 3 per cent down the dip. It is, therefore, possible that oil in these two fields to a considerable extent may be derived from comparatively rich sediments down the dip from the fields.

In Wyoming the organic content of the Cretaceous formations decreases toward the west, as does the yield of oil. Similarly, in the faulted area on the west side of the East Texas basin, the production of oil in the north part of the area is considerably less than in the south part; and the organic content of the Eagle Ford shale, which is associated with the oil horizons, similarly is less in the north part than in the south part. In both Wyoming and this area in Texas the organic content of the sediments in regions of comparatively little oil is at least 50 per cent of what it is in areas of comparatively much oil. In the lean oil-producing areas the organic content is of the order of magnitude of 1.5 per cent, which is about the general average for sediments; and in the rich oil-producing areas it is about 3 per cent, which is considerably above the average. The relationships in these areas, therefore, support the concept that sediments which are comparatively rich in organic matter are apt to be favorable source beds.

However, source beds are only one of the several factors affecting the accumulation of oil in commercial quantity, and the distribution of oil in the areas mentioned above is influenced by other factors, one of which is the migration of oil. In fact, the study of source beds is handicapped greatly by the scarcity of knowledge as to how oil migrates. Consequently, at present it is practicable to point out only general relationships between content of organic matter and the occurrence of oil.

Although a comparatively rich organic content seems to be a favorable indication of source beds, it does not follow necessarily that oil comes from the richer sediments. The oil in the Carboniferous formations of Wyoming is associated with sediments containing less than 1 per cent organic matter. Similarly, the relatively rich content of bituminous substances in the lower part of the Arbuckle limestone, encountered in the well from the Seminole area in Oklahoma, lies wholly in a zone of very low organic content. On the other hand, the organic content of the upper Cretaceous formations in Wyoming, in general, is relatively high; but oil horizons are not so uniformly distributed as the rich sediments. Consenot associated with rich sediments. Evidently other factors, like the volatility, the degree of reduction of the sediments, or the ease of migration of oil out of the sediments, have to be considered. In fact, some of the data already obtained seem to indicate that comparatively high volatility or high degree of reduction is a favorable indication of source beds. The next phase of the work to be undertaken by the project is to study the effect of these two factors.

Acknowledgments

The writers have been associated with the project relating to ancient sediments since its inception. Mr. Trask is a member of the staff of the U. S. Geological Survey, and is a director of the project. Mr. Hammar is a research associate of the American Petroleum Institute. W. Ross Keyte for two years was connected with the project as a research associate of the Institute. Many of the data about the Mid-Continent and Texas areas are based on the work of Mr. Keyte. The laboratory headquarters for the project are in the Division of Chemistry, National Bureau of Standards, Washington, D. C. This courtesy was made possible through action of the late E. W. Washburn, former chief of the Division of Chemistry. The work in the laboratory has been facilitated greatly by many kindnesses extended by E. Wichers, who is in immediate charge of the section of the Division of Chemistry in which the laboratory is located. During the two years that Mr. Keyte was associated with the project, his headquarters were at a laboratory in the School of Engineering of Tulsa University, Tulsa. This laboratory was made available through courtesy of R. L. Langenheim, dean.

The progress of the project has been facilitated greatly by the enthusiastic co-operation it has received from the petroleum industry. In a progress report like this it is impracticable to list the numerous individuals and oil companies that have assisted the project by supplying well samples and giving information on a great variety of subjects. The geologic correlation of well samples, which is so essential for this paper, is based almost entirely on information supplied by many geologists. The writers are extremely grateful to all organizations and individuals for the assistance they have given.

[11] P. D. Trask, H. E. Hammar, and C. C. Wu. op. cit., p. 110-72.

[12] P. D. Trask, H. E. Hammar, and C. C. Wu, op. cit., p. 279-82.

George Goad, in the crude oil department of the Tide Water Oil Co., Houston, Texas, and Miss Marie Bibby, secretary to Capt. E. N. Stanley, in charge of the Railroad Commission's forces at Kilgore, East Texas

FEDERAL SPECIFICATIONS

The Government Printing Office has issued the following specifications:

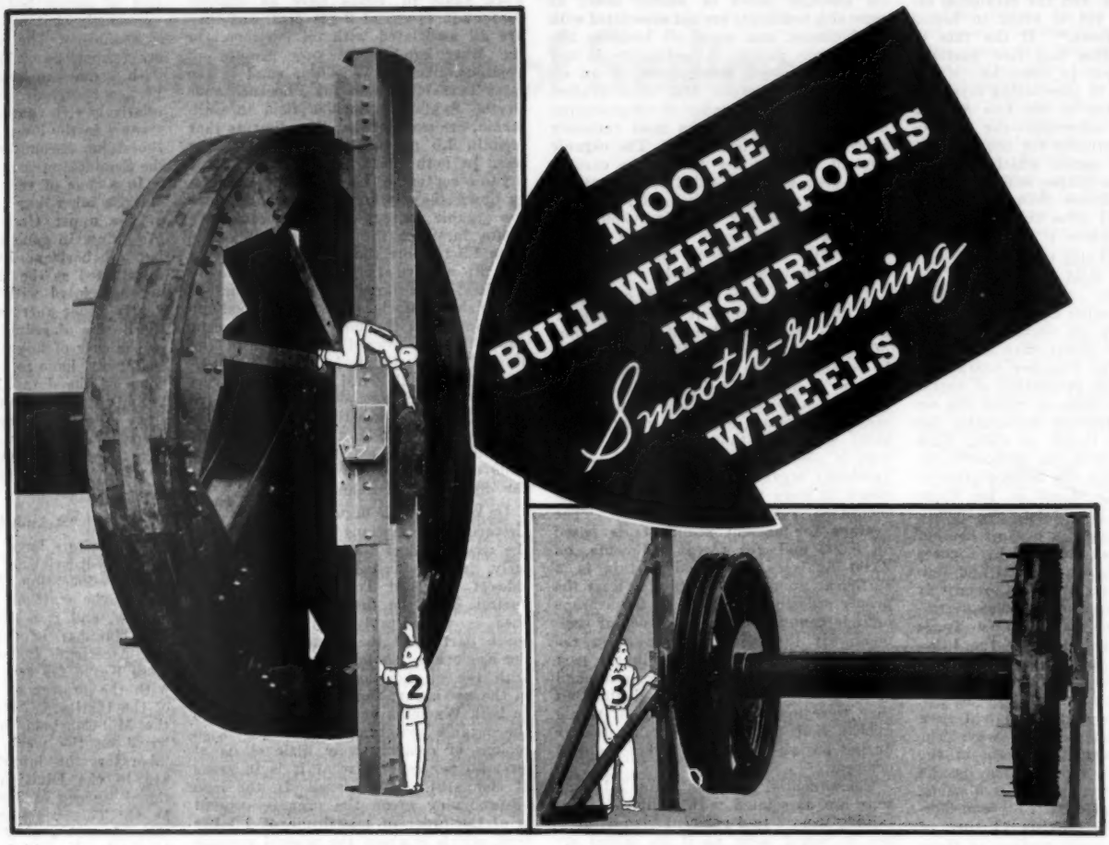
Federal Specification VV-L-751, "Lubricant; Chain and Wire Rope," superseding part of F.S. No. 2d, October 21, 1927.

Federal Specification VV-O-231, "Oil; Cutting, Soluble," superseding part of F.S. No. 2d, October 21, 1927.

Copies may be obtained from this office at the price of 5 cents each.

ERECTING TANKAGE

The Utah Refining Co. is erecting a 55,000-bbl. steel tank at its Kilgore plant, and the Atlantic Oil Producing Co. is erecting two 55,000-bbl. tanks at its Kilgore pump station.



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Trend to Better Prices in Chicago Market; Effort to Correct Local Conditions

By SPECIAL CORRESPONDENT

CHICAGO, Dec. 3. — Continuation of the trend toward higher tank wagon and service station gasoline prices in the past few days has accompanied a new steadying and firming of the tank car market. The leading marketing companies appear opposed to any general advance in retail prices and are working on the basis of a correction of local price conditions. Local committees are still working hard on such a policy in many sections where badly depressed conditions long have been in effect.

Buyers of gasoline in tank car lots who are seriously in the market for considerable quantities have been surprised by the relative scarcity of supplies, especially where their needs have been for material of quality. There are spots where some gasoline is offered, but on the whole it appears there is little material available. If the Tender Board can maintain its position in East Texas, it is expected a strong market can be maintained for quite a period, providing retail prices continue their present trend.

Discounts Reduced

The initiation of the long-discussed reduction in dealer discounts occurred on December 1, to the accompaniment of threats and dissatisfaction on the part of many dealers, despite the fact a fairly good percentage of dealers signed the new contracts prior to that date. It is uncertain what dealers intend to do, but they have threatened, through one or two of their associations, to boycott major companies' branded products, the majors having refused to accede to demands that the reduction in discounts be deferred. Some dealers already have boycotted majors' motor oils, with actual results subject to varied reports. Majors have informed their dealers they are unable to grant the request the reductions be deferred, but have promised the 3-3-2 schedule will be the absolute minimum and improvement of conditions may change, so some modification may be expected.

Much interest attaches to the elimination of regulations covering maximum discounts on commercial consumer business. Gentlemen's agreements in various areas covering the practice to be followed in granting commercial discounts are being worked out, and the feeling is it will be possible to prevent excessive allowances at least for a period of months.

Committee Meeting

The troublesome question of a retail price differential on gasoline is still causing qualms. These and other questions are among those being studied by the stabilization committee meetings here this week. One or two majors have refused anew to recognize any price differential, although in Chicago many small sellers are posting prices about one-half cent below the majors.

With natural gasoline firming up, the high-volatile gasolines are in good call here and in the northern tier of central states, due to lower temperatures. Prices are fractionally better on these items. Jobber buying of all gasoline shows improvement, especially in the spot market, which has been rather dull for a long time. Contract orders are running at a good rate for this season. Indications are some of the abnormally large tank wagon business being experienced by some major sellers as the result of low tank wagon prices is now swinging back to tank car, as the result of price adjustments recently.

Kerosene

Kerosene is not very active but is

(Continued on Page 56)

Crude Oil Prices

(Continued from Page 25)

Humble Oil & Refining Co. and Texas Co Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 15, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers: Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co. Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective Nov. 6, 1934)

Bradford, Pa.	$2.30
Allegany, N. Y.	2.30

SOUTH PENN OIL CO.
(Effective Nov. 6, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.30
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.97
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.93
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.83
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.87

PENNZOIL CO.
(Effective Nov. 6, 1934)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.	$2.33
Group B (includes Titusville district.	2.21
Group C (Includes Turkey and Tidioute districts.	2.20
Group D (Includes Bear Creek and Porkey districts.	2.19
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinsua districts. Price depends on length of pipe line haul to plant at Oil City.	2.17

PURE OIL CO.
(Effective Nov. 6, 1934)

Cabin Creek, W. Va.	$1.93
Bradford Hollow, W. Va.	1.92
Kelly Creek, W. Va.	1.93

CREW-LEVICK CO.

Oil City-Titusville	$2.32

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.08
Midland, Mich. (Sept. 30, 1933)*	1.03
West Branch, Mich.	.85
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.28

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$1.00

*F.o.b. ship, based on September transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.73	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	...	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19 19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

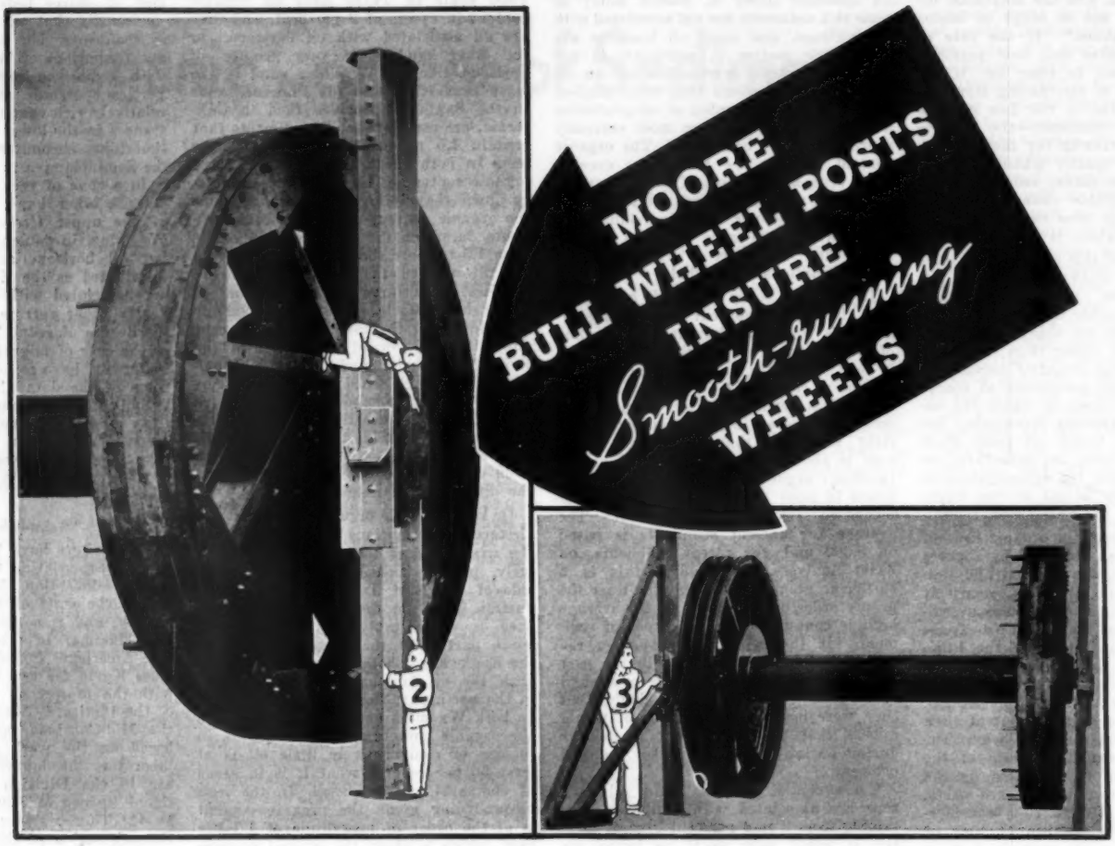
Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon an Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 36 degrees and over; Coyote Hills, 23 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.



The self-aligning bearings (1) in Moore Posts, by compensating for irregularities in bull wheel construction, give a smooth running wheel at all times. Bearings can be furnished to fit any size of gudgeon. They are of the spherical type, permitting alignment in all planes without heavy wear of the bearing surfaces. The ends are closed to keep out dirt and grit. The elimination of fire hazards is another important factor in the use of these steel posts. They are made of 13" car channels (2) having a 4" extra heavy flange, and are effectively reinforced (3) and braced.

The Moore Bull Wheel has channel spokes securely attached to the shaft by wing plates that are both riveted and welded. The patented tug rim is rolled in one piece, with either double or triple V grooves. Shafts are of extra heavy welded pipe—either ½" or 1⅛" thick—with gudgeons shrunk and riveted into place.

LEE C. MOORE & COMPANY, INC.
TULSA—PITTSBURGH
Dallas Houston Henderson Kilgore Longview Midland Odessa Pampa
Wichita Falls, Texas; McPherson Wichita, Kansas
Stocks in all active fields

You will profit by investigating Moore modernized, proven equipment.

Moore PUMPING Equipment

STEEL DERRICKS SINCE 1908

DERRICKS · SUBSTRUCTURES · HANGERS · WALKING BEAMS
SAMSON POSTS · JACK POSTS · BULL AND CALF WHEEL POSTS
WHEELS · PITMANS · IMPROVED BEARINGS · CROWN BLOCKS
PORTABLE PUMPING UNITS · CLEAN-OUT MACHINES · WINCHES

Trend to Better Prices in Chicago Market; Effort to Correct Local Conditions

By SPECIAL CORRESPONDENT

CHICAGO, Dec. 3. — Continuation of the trend toward higher tank wagon and service station gasoline prices in the past few days has accompanied a new steadying and firming of the tank car market. The leading marketing companies appear opposed to any general advance in retail prices and are working on the basis of a correction of local price conditions. Local committees are still working hard on such a policy in many sections where badly depressed conditions long have been in effect.

Buyers of gasoline in tank car lots who are seriously in the market for considerable quantities have been surprised by the relative scarcity of supplies, especially where their needs have been for material of quality. There are spots where some gasoline is offered, but on the whole it appears there is little material available. If the Tender Board can maintain its position in East Texas, it is expected a strong market can be maintained for quite a period, providing retail prices continue their present trend.

Discounts Reduced

The initiation of the long-discussed reduction in dealer discounts occurred on December 1, to the accompaniment of threats and dissatisfaction on the part of many dealers, despite the fact a fairly good percentage of dealers signed the new contracts prior to that date. It is uncertain what dealers intend to do, but they have threatened, through one or two of their associations, to boycott major companies' branded products, the majors having refused to accede to demands that the reduction in discounts be deferred. Some dealers already have boycotted majors' motor oils, with actual results subject to varied reports. Majors have informed their dealers they are unable to grant the request the reductions be deferred, but have promised the 3-3-2 schedule will be the absolute minimum and improvement of conditions may change, so some modification may be expected.

Much interest attaches to the elimination of regulations covering maximum discounts on commercial consumer business. Gentlemen's agreements in various areas covering the practice to be followed in granting commercial discounts are being worked out, and the feeling is it will be possible to prevent excessive allowances at least for a period of months.

Committee Meeting

The troublesome question of a retail price differential on gasoline is still causing qualms. These and other questions are among those being studied by the stabilization committee meetings here this week. One or two majors have refused anew to recognize any price differential, although in Chicago many small sellers are posting prices about one-half cent below the majors.

With natural gasoline firming up, the high-volatile gasolines are in good call here and in the northern tier of central states, due to lower temperatures. Prices are fractionally better on these items. Jobber buying of all gasoline shows improvement, especially in the spot market, which has been rather dull for a long time. Contract orders are running at a good rate for this season. Indications are some of the abnormally large tank wagon business being experienced by some major sellers as the result of low tank wagon prices is now swinging back to tank car, as the result of price adjustments recently.

Kerosene

Kerosene is not very active but is

(Continued on Page 56)

Crude Oil Prices

(Continued from Page 25)

Humble Oil & Refining Co. and Texas Co Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Ilea, light (Sept. 29, 1933)	$.96
Ilea, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1932)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 15, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)..	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Ilea by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroluem Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co. Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

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15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.72	.69	.72	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$ .83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	...	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1 06
30-30.9	1.09	1.10	1.12	....	....	..	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1 09
31-31.9	....	....	....	....	....	..	1.12	....	....	....	....	1.08	1 12	1.09	....	....	1 12
32-32.9	....	....	....	..	..	..	1.15	....	....	....	....	1 12	1 15	1.13	....	..	1.15
33-33.9	....	....	....	..	..	....	....	....	....	....	....	1.16	1.18	1.17	....	..	1.18
34-34.9	....	....	....	..	..	....	....	....	....	....	....	1.19	1.21	....	..	....	1 21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	..	..	....	..
36-36.9	....	....	....	....	....	..	....	....	....	....	....	1.26	....	....	....	....	..
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	..
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standar Oil Quotations

Mountain View—Effective July 3, 1934, the following are the pri of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19 19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon an Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 36 degrees and over; Coyote Hills, 23 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

Spark Timing Important in Engine Performance

By JOSEPH LISTON
Professor Mechanical Engineering, University of Oklahoma

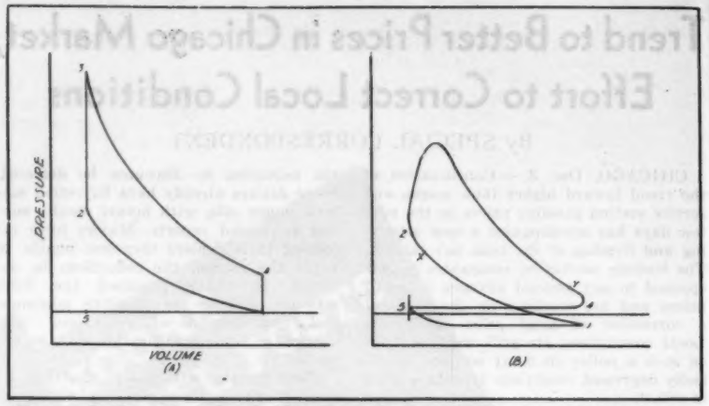

Fig. 1—Indicator cards of (A) theoretical, and (B) actual full load conditions in an internal combustion, spark ignited gas engine. These diagrams trace a complete cycle in the operation of the engine, and any point on the curves represents an instantaneous pressure inside the cylinder at a given volume determined by the position of the piston

Few operators of internal combustion engines realize the importance of proper spark timing. True, most of them have observed that a retarded spark causes loss of power and a sluggish engine and frequently a tendency to overheat, but the why of this is something of a mystery. However, the proper spark timing is important not only in obtaining smooth performance but also in producing the most economical operation.

The reason underlying the necessity for spark advance can perhaps best be studied from the indicator card. Reference to Figure 1, (a) is the theoretical card for spark ignited engines and (b) is a full load card from a typical gas engine. In the theoretical card compression is from 1 to 2, ignition occurs at 2, and burning of the fuel is considered to take place instantly while the piston is at dead center. The pressure rise due to burning is from 2 to 3. Expansion of the burned gas is from 3 to 4, and exhaust is from 4 to 1 or, in the four-stroke cycle engine, from 4 to 1 and 1 to 5. Intake is from 5 to 1.

The useful work of the engine is directly proportional to the area enclosed in the card, and it is, therefore, important to have as large an area as possible enclosed for any given condition of operation of the engine.

In the actual card the events occur in the same order, but there are certain important differences. The spark should not occur at 2 but at some point before the end of the compression stroke as at X. Pressure rise does not begin immediately following ignition but is delayed while the flame spreads through the compressed fuel-air mixture. Pressure rise will not be instantaneous because the fuel does not burn instantly. Thus, the piston starts down on the expansion stroke while the pressure is still rising, and, due largely to the increasing volume of the space above the receding piston, the pressure does not rise as high. The exhaust valve opens before the end of the expansion stroke at some point Y, and the exhaust gases are pushed out of the cylinder on the exhaust stroke 4 to 5 at a pressure greater than atmospheric. The new charge is taken into the cylinder from 5 to 1 at a pressure less than atmospheric. The net work done is proportional to the area of the upper part of the card minus the area of the lower part.

The area of an actual card for a given engine is always less than the area of its theoretical card, and, in consequence, the work that is done is less than the theoretical amount. However, the area of the actual card can be made to approach fairly close to the area of the theoretical card. It is always desirable to do this since additional work is obtained from the engine with no increase in fuel consumption.

Effect of Spark Setting

One of the most important methods of increasing the area of the indicator card is to adjust the spark properly. Figure 2 (a) shows the effect of retarding the spark. The shaded area is the part lost because the pressure rise during burning begins later and the pressure does not attain as high a value since the piston is farther down on the expansion stroke, and the volume occupied by the gas is increasing more rapidly. Figure 2 (b) shows the effect of too great an advance of the spark. It will be observed that pressure rise begins before the end of the compression stroke. This tends to resist the turning of the engine and thus decreases the power output. The shaded area represents the work lost. More important, however, is the fact that, with too advanced a spark, the pressure rises to very high values and very rapidly. This results in a sharp knocking in the engine and produces severe stresses in the moving parts.

It is more convenient and usually more accurate to study the effects of ignition timing by putting the indicator out of phase with the engine piston. The usual setting for such studies is an indicator that is 90 degrees out of phase. The effect of this is to spread out the part of the card which shows ignition and burning so that it can be studied more accurately.

Figure 3 shows why this is true. Let A represent the center of the engine crankshaft, B the center of the crank pin, and D the center of the piston pin. As the shaft turns, B moves in a circular path, and D moves back and forth from E to J. B moves at constant velocity for any given engine speed, but the velocity of D varies from zero at E and J to a maximum at point I. During the time that the crankpin moves through the distance from B to C, the piston pin moves from D to E, and, if the indicator is in phase with the engine, the drum will move an amount proportional to D E. But if the indicator is 90 degrees out of phase, i.e., leads the engine piston by 90 degrees, the drum will move an amount proportional to H I, a distance much greater than it would move if in phase. Ignition and pressure rise will occur while the piston pin is moving from D to E and back to D, and, with the indicator out of phase, the drum will move a distance proportional to about twice H I. Thus, it is obvious that the card will be spread out much more than if the indicator were in phase.

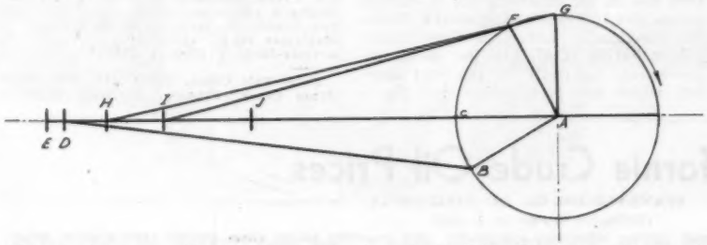

Fig. 3—Diagram showing the mechanics of obtaining in phase and out of phase indicator cards

Figure 4 shows a card taken with an indicator 90 degrees out of phase. Curve A B C would result if the engine were cranked over with the ignition switch off. On the in phase card, A B and B C would closely coincide. With the ignition turned on, Curve A B D E would result. Point X represents the time of occurrence of the spark and X B the amount of advance ahead of top dead center or the end of the compression stroke. X B on the in phase card and out of phase card represents the same amount of time in fractions of a second. The spreading effect is clearly evident.

It will be noticed that Curve A B D E continues to coincide with Curve A B C from X to B after the spark occurs. This is due to the delay in burning, i.e., the time when the flame is beginning to spread through the mixture. It is termed the ignition or burning lag. All fuels have this characteristic to a greater or less extent, and it is this ignition lag that necessitates advancing the spark ahead of dead center. If pressure rise occurred immediately following ignition. X could be located at B, i.e., the spark could be set to occur at the end of compression.

If we retard the spark, curves similar to those in Figure 5 will result. The smaller area of the card due to less pressure rise and the correspondingly smaller amount of work obtained is at once apparent.

Studies of these phenomena require more or less costly equipment, but the effects of spark timing are easily observed. For instance, if an engine is operating at full load with the proper spark timing, and the spark is retarded, it will handle the load with much more difficulty or fail entirely. If it continues to run, it will usually overheat, and the fuel consumption will be increased. Most motorists have experienced the sluggishness of their cars when the spark is retarded and have heard the

(Continued on Page 46)

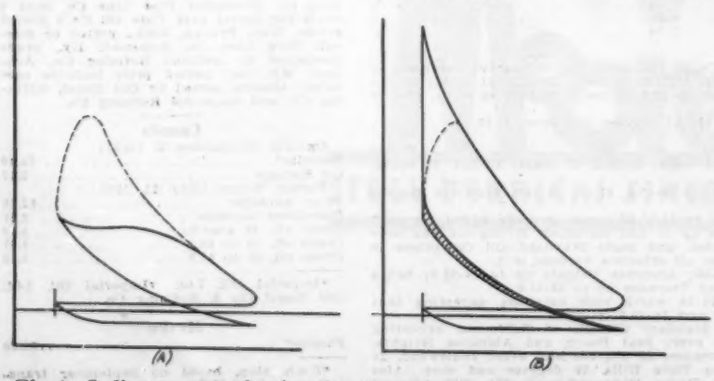

Fig. 2—Indicator cards showing the effect of advancing and retarding spark

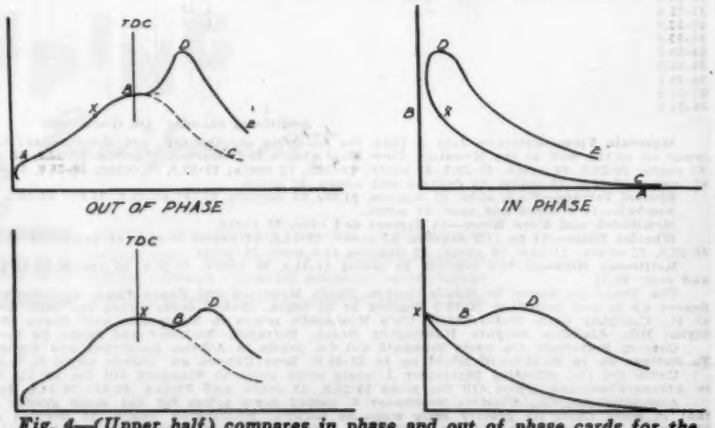

Fig. 4—(Upper half) compares in phase and out of phase cards for the same conditions of advanced spark

Fig. 5—(Lower half) shows the same comparison with the spark retarded

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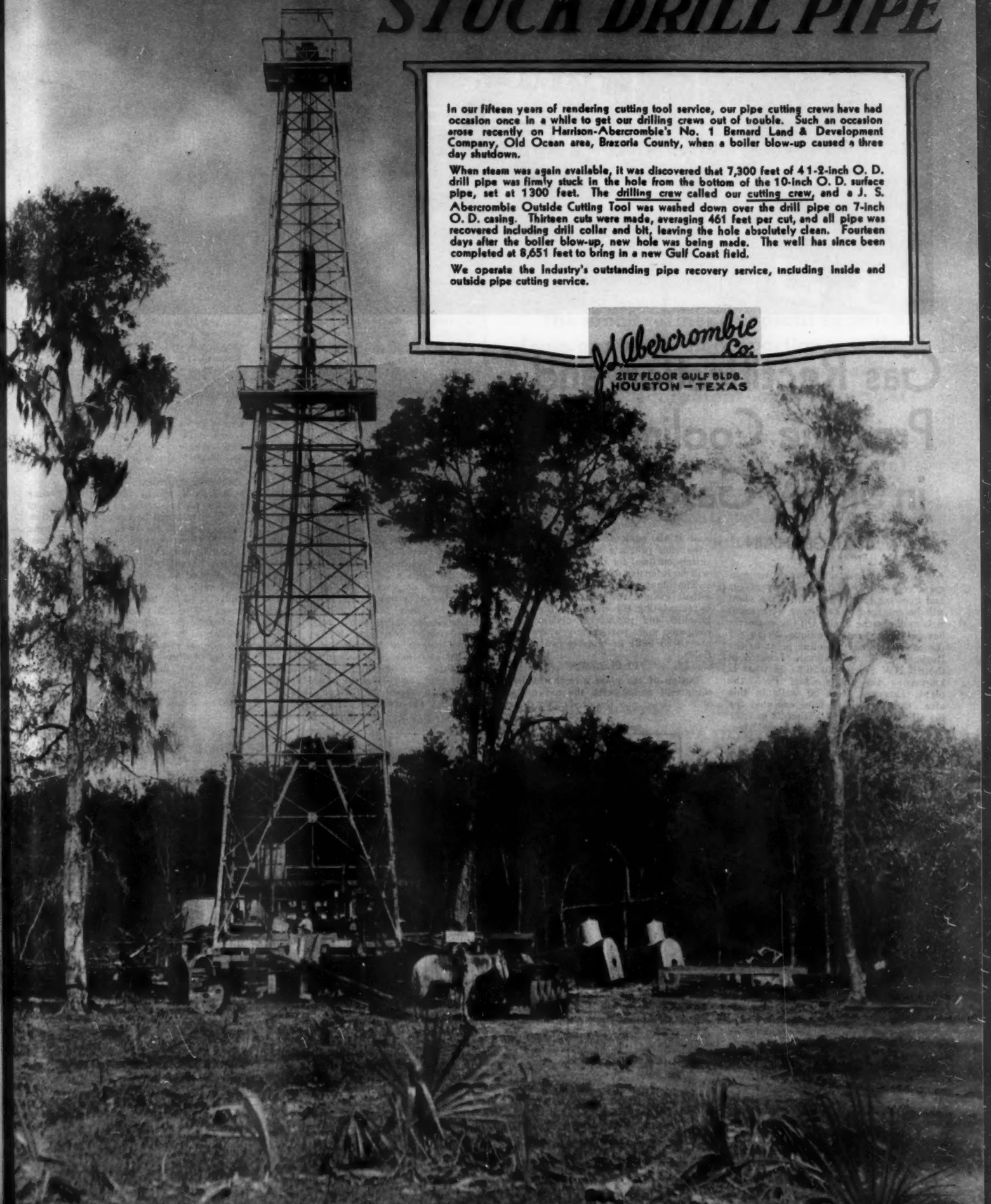

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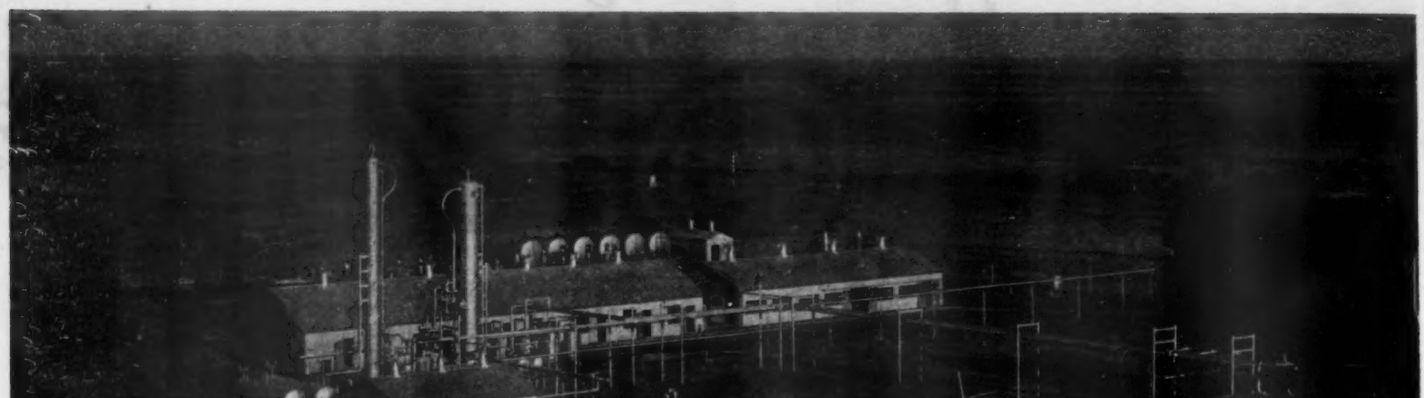


Gas Rectification and Propane Cooling Used in Skelly Gasoline Plant

By W. T. ZIEGENHAIN

Faced at present with having to process a constantly varying quantity of gas and knowing that in the future the plant will be enlarged to take care of a much richer supply, the Skelly Oil Co. engineers have chosen a rather unique design for the company's new gasoline plant in the Burbank Field of Oklahoma. Located in the SE NW Section 10-26-6e, in what is known as the Little Chief Pool, the plant takes gas from 50 wells in this area. Contracts have been executed for the oil and gas produced from 23 quarter sections and others are being negotiated. At present the plant is turning out an average of 5,500 gallons of 14-pound natural daily, but equipment is being added which will step up production to 7,000 gallons within a month. As the field is developed and production is turned to the 26-70 grade of natural, the ultimate yield will approach 20,000 gallons daily.

Field Conditions

At present the field is observing rather stringent proration rules and this factor alone is responsible for much of the hour-to-hour variation in the quantity of gas coming to the plant. Also, there is a wide variation in the tubing pressures among the 50 wells now connected.

Generally speaking, about 30 per cent of these are "high-pressure" wells. The two Skelly wells which are connected to the plant as part of the group of 50 are typical of what has been called high-pressure wells. One of these exerts a tubing pressure of 1,000 pounds and the other 350 pounds. These two wells alone could more than supply the gas requirements of the plant and are considered capable of producing 12,000,000 feet of gas daily. The plant is handling an average of about 5,000,000 feet.

Plan for Future

With these limitations operative, it was necessary to choose equipment that would permit maximum flexibility now and at the same time lend itself to the expansion program which is rather definitely outlined for the future when there will be intensive development of the field.

The plant might be considered an excellent example of what may be gained by correlating the efforts of the natural gasoline and production divisions of a company, more particularly where plants are to be built in undeveloped prorated fields.

Plant Design

Design of the plant and the choice of equipment rested with the natural gasoline division and the production department and, more specifically, with J. W. Vaiden, head of the gasoline division. Briefly stated, the plant my be described as one of the compression type, using the principle of gas rectification, utilizing propane for cooling and is equipped to stabilize production to a low vapor pressure.

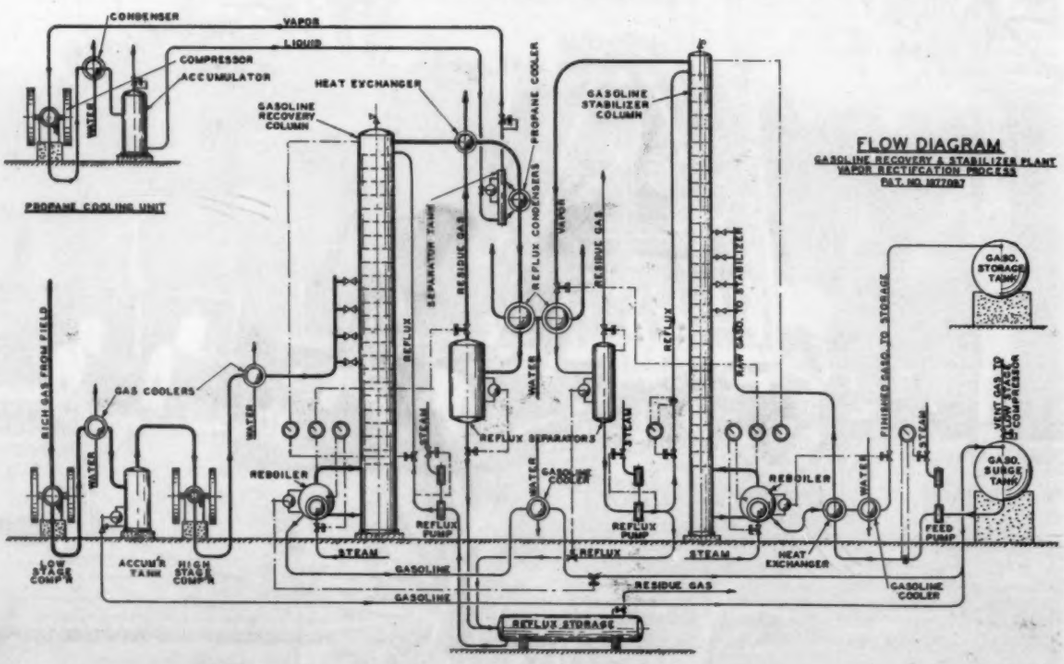
In the actual processing of the gas reference should be made to the accompanying simplified flow chart. The gas supplied to the plant averages 1¼ to 1½ gallons per thousand feet based on 26-70 production and enters the system through gathering lines that vary in back pressure from 5-inches of mercury to 10 pounds gauge depending upon the number of wells producing at the time. The plant has operated over a period of about three months and six 180-horsepower, Type 10 Bessemer compressors equipped for fuel injection have been handling the load to date, but four similar units are being added in preparation for handling proportionately more gas. Except for the added volume of gas handled there will be little change in the operation of the plant for the immediate future or at least until the gas becomes substantially richer. At present the field gas shows the following approximate analysis:

	Mol per cent
Methane	61.6
Ethane	17.8
Propane	13.0
Iso-butane	1.4
N-butane	3.8
Pentanes and heavier	2.4

Because of the relatively low percentage of these heavier fractions when compared with the proportion of methane and ethane present it was deemed advisable to include a propane cooler as part of the recovery system. This is in operation at present.

Before discussing the propane cooling system, the processing of the field gas up to this point will be traced. On the flow chart the rich gas is shown as entering on the low-pressure side of the compressor, and then passing through a cooler. Actually it is cooled to about 80° F. and is under a pressure of about 60 pounds in the Griscom-Russell open cooler used at this point in the processing. The gas then enters the intake header on the high-pressure side and is discharged into an after-cooler at about 300 pounds pressure. In the after-cooler the temperature of the gas is reduced to about 140° F. and under these conditions the gas and condensate enter the gasoline recovery column.

This column is a standard Petroleum



Engineering tower 48 inches in diameter and is equipped with 24 trays of bubble caps. Heat is added to the column by means of a reboiler connected into the base of the column. Provision is made to hold a constant level of condensate in the bottom of the tower, the excess being continuously withdrawn to the gasoline surge tank which operates as the feed tank for the stabilizer. This transfer is accomplished without pumping in as much as the surge tank is vented to maintain a pressure of about 50 pounds. That portion of the original gas that did not condense in the tower passes upward and out through an exchanger where it gives up heat to the residue gas leaving the system. It is further cooled by passing it through a series of Griscom-Russell sections in the water spray tower. The gas is given a final cooling to about 54° F. by the refrigerating effect of the propane system.

By cooling the gas to this low level it has been possible to hold the gasoline content of the residue to within limits of .022 to .05 gallons per thousand. This is excellent considering the varying quantity and quality of the gas processed.

The propane system is comparable with any simple gas refrigerating system in its operation, requiring only about 60 horsepower to supply the energy needed by the system.

The accompanying flow chart indicates that the gas then passes through a water exchanger. This is not true in practice at present, however, for the gas is all ready cooler than the available plant water. This exchanger is shown because it will be put into service just as soon as the gas becomes rich enough to make the use of the propane cooler unnecessary. Observation indicates that this change can be made when the field gas yields about 2 gallons per thousand in comparison with 1¼ to 1½ gallons at present.

At present the gas goes directly from the propane cooler to a reflux separator. To supply an adequate quantity of reflux at all times and under all variable conditions of gas supply, separate reflux storage tank is provided.

A novel control system has been devised to assure an ample storage supply at all times, the system drawing upon a portion of the overhead condensate off the stabilizer, more clearly indicated in the flow chart.

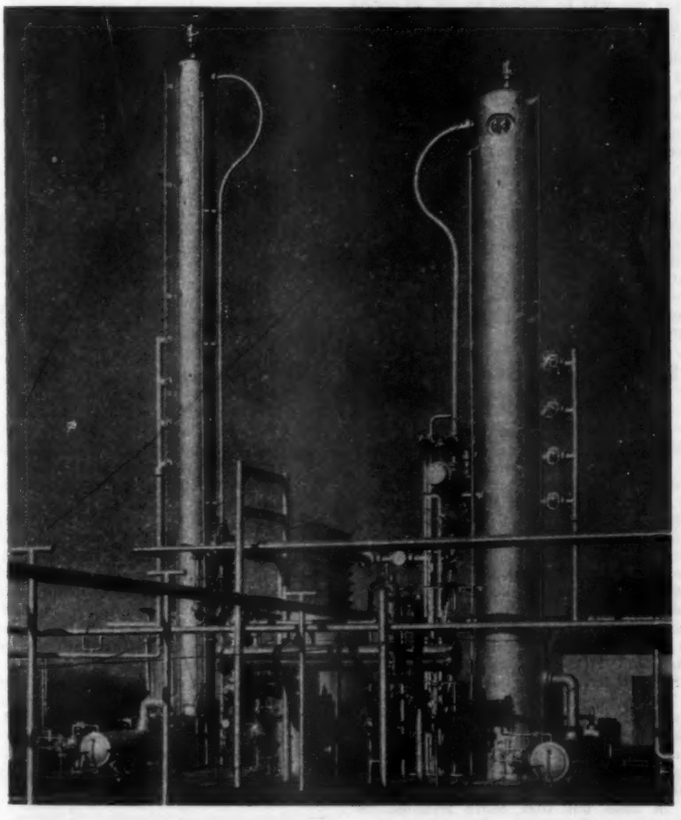
Stabilizer Unit

The stabilizer unit operates in a conventional manner, the principal work being done in the 30-inch Petroleum Engineering tower equipped with 30 trays and reboiler. The accompanying flow chart traces the processing of the raw gasoline from the surge tank through the tower to finished storage as a 14-pound product at present.

The quantity of steam used in the plant is relatively low and serves as an index for judging the efficiency of the vapor rectification system. Only one 65-horsepower boiler is in the plant and that is supplying power for the four steam pumps and recovery column in addition to that used as heat in the stabilizer.

The production of the plant is now delivered into a nearby gasoline pipe line but plans are under way to deliver the output in the future to the Skelly plant at Lyman through a 12-mile pipe line to be laid to connect the plants. At Lyman the gasoline will be further processed or treated and offered as a finished product.

Although the design of plant, choice of equipment and method of operation was under the direction of the natural gasoline division of the Skelly Oil Co.'s production department, the construction work was done under a turn-key contract by the J. F. Pritchard Engineering Co. An important phase of this plant's design and operation lies in the separation of the condensate from the incoming vapor and gases after each stage and collecting and mixing the condensates and introducing them along with the uncondensed vapor into a tower for complete rectification. Advantage is also taken of the heat generated by compression to effect a saving in operation. These features and the necessary equipment were supplied by Petroleum Engineering, Inc., affiliated with the Arthur G. McKee Co.



Closeup of fractionating equipment showing stabilizer tower on the left and gas fractionator on the right

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Spark Timing Important in Engine Performance

(Continued from Page 42)

unpleasant knocking when the spark is advanced too far. They have probably attributed the knocking to detonation, and there is a close relation between the two, but they are not the same, although knocking caused by too advanced a spark can cause detonation.

It is of interest to note that the brake horsepower of a test engine at the University of Oklahoma was doubled merely by advancing the spark from full retard to the proper position. The gross fuel consumption was held constant in this test. Thus, the specific fuel consumption (pounds per brake horsepower hour) was cut in half. While this is an extreme case, even a relatively few degrees of change in the spark timing will make considerable improvement in performance and at the same time lower the cost of operation. Obviously, such a simple adjustment as setting the spark timing properly should not be neglected

New Premium Gasoline Will Feature Volatility

(Continued from Page 28)

practical solution to the problem, assuming other refiners follow the lead of the New Jersey and Gulf companies, will probably be that generally speaking more natural gasoline will be used than at present, that purchases of natural for that use will be limited to the 10-pound and 12 pound vapor pressure grades and will be almost butane free. The new specification of 78 octane number instead of the 76 required of all Ethyl Gasoline should not prove a disadvantage in using more natural in favor of specially processed cracked gasolines because the difference of 2 points may be most easily and economically taken care of by including slightly more Ethyl fluid.

This turn in events may prove beneficial to the Mid-Continent natural gasoline market in particular and may be the solution of its problem of overproduction. Attention is being closely centered on movements and inquiries for material moving to the Gulf Coast and East Coast from this field.

1933 Natural Gasoline Summary Shows Decrease

(Continued from Page 28)

pleted, the total capacity of all plants on January 1, 1934, was 10,060,000 gallons daily, compared with a capacity of 11,387,000 gallons at the beginning of 1932. The elimination of the smaller and weaker units of the industry in recent years has resulted mainly from a steady decline in prices. However, in 1933 the average selling price increased, and the continued elimination of the uneconomic plants can probably be ascribed to the fact that the gain in prices was too small to allow the marginal operators to remain in business.

The relative rank of the principal natural-gasoline producing states in 1933 was much the same as in 1932 except that Texas, which had been third, replaced Oklahoma in second place. Production in California declined materially in 1933 but that State retained its rank as the leading producer.

The marketing of natural gasoline in the last decade has become increasingly difficult due to a growing indifference of the refiners with cracking plants. It has been a buyers' market and prices have suffered in consequence. In 1933 the inception of Q contracts improved the refinery market for natural gasoline so as to increase volatility, with the result that direct sales of highly stabilized natural gasoline to consumers fell off. Stocks of natural gasoline showed a small increase during the year, totaling 139,052,000 gallons on December 31, 1933.

Prices of natural gasoline in the first half of 1933 reaches the lowest levels in the history of the industry. The price of 26-70 natural gasoline on January 1 was about 2.5 cents per gallon but by June 1 this price had fallen to 1 cent or a shade lower. Higher quotations for crude oil and gasoline were reflected in natural gasoline prices which improved during the summer months to over 5 cents per gallon. The seasonal decline in consumption was followed by a softening in prices during the fall and the quotation for the 26-70 grade on December 31 was 3.5 cents. The average value of all the natural gasoline produced in 1933 was 3.8 cents per gallon as compared with 3.2 cents in 1932; the total value, accordingly, rose from $49,244,000 in 1932 to $54,368,000 in 1933.

Test Proves Lubricating Value of W-Grade Oils

(Continued from Page 30)

carbon, there being no more than would be expected after a 50-mile run.

One of the most remarkable things about the used oil was that the water and sediment amounted to only 0.3 per cent, of which 0.15 per cent was water, and the dilution to less than 2 per cent. The acidity had changed from neutral in the new oil to 3.6 mgs. KOH/gm., which, taken in conjunction with the very small amount of sediment shows that oxidation had been negligible.

Data on the oil used in the test are summarized in the following table:

Oil installed at start of run, kg.	4.482
Specific gravity of new oil	0.921
Quarts of new oil installed	5.15
Oil drained at conclusion of run, kg.	1.310
Specific gravity of used oil	0.942
Quarts of used oil drained	1.47
Oil used during test, quarts	3.68
Oil consumption per 1,000 miles during test, quarts	0.73
Miles per quart of oil used during test	1,360

T. E. Allen, in the official report of the American Automobile Association, draws the following conclusions:

"Under the test conditions excellent results were obtained with respect to oil consumption using 20-W motor lubricating oil. Based upon the results of this test, the inference is reasonable and logical that a car with standard equipment in every respect, in good mechanical condition, might satisfactorily use 20-W motor oil, of a quality comparable to that of the oil used in this test, for winter driving, particularly if reasonable attention is paid to the reduction or stopping of oil leakage.

"With respect to the relation of atmospheric temperatures to oil consumption while using a 20-W grade, it should be noted that approximately half of the distance covered was south of the Mason-Dixon line and much of it in the extreme South.

"It is pointed out that this test was conducted to determine the amount of oil actually consumed in the essential lubrication and operation of the motor and that in order to obtain accurate data special precautions were taken to eliminate oil leakage and the excessive or unnecessary passage of oil from the cylinder walls into the combustion chambers. Obviously, therefore, while it is proven that satisfactory lubrication results from the use of this lighter grade of oil, an equally high mileage per quart cannot be expected in a car of normal mechanical condition using an oil of a similar or even somewhat heavier grade."

Blaine Johnston, Simms Oil Co. and Leon J. Pepperberg, Dallas geologist

Important Wildcat Location in Andrews County; Foard County Production Extended Northwest

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Dec. 3.—There were nine locations staked in the West Texas district during the week, one an exceptionally important wildcat. This test, York and Harper's No. 1 Hereford Stock Farms, is in the center of Labour No. 12, League 315, Parmer County School Lands, northeast of Florey, Andrews County, and near the north line of the county, approximately 4 miles northeast of the Humble Oil & Refining Co.'s discovery on the Means ranch, in Section 4, Block C-45, Andrews County. Harry Adams of Midland assembled the block, composed of three leagues in the School Lands Survey. Stanolind Oil & Gas Co. has purchased two spreads around the test. Magnolia Petroleum Co., Plymouth Oil Co., Shell Petroleum Corp. and others have also purchased spreads or acreage.

Mitchell County

Harry Adams Corp. is also preparing to drill a wildcat in Section 13, Block 29, Township 1n, T.&P. Survey, on the Mackey lands, in Mitchell County, approximately 7 miles northeast of the Dodge-Denman Pool in eastern Howard County, and 4 miles west of the Westbrook Pool. The corporation has a 5,000-acre block on which the test is to spud by January 1. Mixon-Capps and Lucas are drilling to the west and Gruber and others are drilling to the southwest a few miles.

Crane County

Gulf Production Co. has staked a wildcat location 2 miles northwest of its Tubbs discovery in western Crane County. A dry hole has already been drilled in that direction from the well which was the first to produce in the Permian Basin below the sulphur water horizon. It was completed about four years ago, but since has gone "dead" and had to be cleaned out before producing again. The new location is in the C NW NW Section 4, Block B-27, Public School Lands, on the Waddell ranch. Loffland Brothers and Gulf Production Co. were reported planning to carry a test from 4,510 feet where it is shut down, to the Ordovician. This test is in the same section as the discovery, and failed to pick up production where the discovery did.

Upton County

Gulf Production Co.'s No. 103 McElroy, in Section 198, Block F, Upton County, is shut down at 10,978 feet after testing and showing but around 3 bbls. of high gravity oil and 104 bbls. of salt water when tested a couple of weeks ago. Drilling is to be resumed later. Sulphur water in the Ellenberger lime, or drilling troubles may stop deeper drilling, but if neither is encountered it may set a record for depths drilled.

Andrews County

R. S. Bond and others' No. 1 Farley, Section 29, Block 3, P.S.L. Survey, several miles southeast of the Deep Rock Pool, and 7 miles southeast of Honolulu and Llano Oil Companies' No. 1 Parker, which promises to make a small producer, has been ordered plugged at 5,001 feet. The Parker test is still being plugged back after a plugging back job from 4,769 to 4,758 feet failed to eliminate sulphur water.

Humble Oil & Refining Co.'s No. 1 Walker, in Section 6, Block A-43, 2 miles north of the nearest producer in the Fuhrman area, and 4 miles west of the Parker test, has plugged back to 4,515 feet from 4,538 feet, but was unsuccessful in shutting off sulphur water. It does not appear encouraging. Same company's No. 1 Means, a quarter of a mile south of the discovery well of the Means Pool, 15 miles northeast of the Deep Rock Pool, flowed 395 bbls. in 17 hours after being acidized with 5,000 gallons. Total depth is 4,527 feet. Before acidizing it flowed only 255 bbls. in 24 hours on its best open flow gauge before being tubed about 10 days ago. It is in Section 2, Block A-35, and is by far the best well of the three completed in this area. Two others are drilling in the vicinity of the producers.

John I. Moore and others' No. 1 McDowell, Ordovician test, in Section 22, Block 34, Township 2s, T.&P. Survey, southwest of the Howard-Glasscock producing area, has reached contract depth at 7,500 feet and 8 feet over, and is believed by some to be in the Pennsylvanian, the series immediately overlying the Ordovician lime in the Big Lake Field, Reagan County. The test is expected to be carried another 1,000 feet or 700 feet in the Ordovician.

Reagan County

Skelly Oil Co.-Utah Southern Oil Co. and others have shown exceptional speed in drilling No. 1 Grayson-University, in Section 33, Block 8, approximately 7 miles southeast of the Big Lake Field, and in Reagan County. It is now drilling near 8,500 feet, and is the second deepest test drilling in the Permian Basin.

Ward County

Plains Production Co.'s No. 1 McGregor, extreme wildcat in Section 169, Block 34, western Ward County, is drilling near the 5,000-foot level after recovering tools lost at 4,980 feet in lime. It is 9 miles southeast of the Delaware lime discovery of Shipley and others on the Monroe lands. Rector Oil Co. is preparing to drill in Section 2, Block 1, W.&N.W. Survey, in the Monroe area.

Humble Oil & Refining Co. has purchased over 20 sections of land in fee, or all of the Throckmorton County School Land Surveys Nos. 1, 2, 3 and 4, in east central Upton County, paying a reported consideration of $45,208. The acreage is about 4 miles north of Upland, the old county seat. A dry hole was drilled to 3,769 feet near the north line of No. 4 Survey.

Ector County

A test is to be drilled in the E half NW Section 1, and one in the S half SE Section 11, both in Block B-16, P.S.L. Survey, on the west and southwest flanks of the Penn Pool in Ector County, as a result of a deal in which Continental Oil Co. subleased two 80-acre tracts for a one-eighth overriding royalty. G. E. Farley of McCamey obtained the leases and is to drill the tests.

There were 11 completions reported in the district, one in Fisher County proving dry, one abandoned in Jones County and two being temporarily abandoned, one in Irion County and one in Reagan County. The remainder were producers, two good wells in Ward County.

WICHITA FALLS DISTRICT

The feature of the week in this district was the completion of the fourth producer on the Les K. Johnson ranch on the extreme western edge of Foard County. The well, rated good for 2,000 bbls. of high gravity oil, with 5,000,000 feet of gas, extends production in the pool 2,000 feet northwest. It drilled sandy lime from 3,546-81 feet, being completed at the latter depth. It is in the SW of Section 36, Block L, S.P.R.R. Survey. The oil tested 46 degrees, the highest gravity produced in the district, the well also proving much larger than others completed throughout the district

The Texas Pipe Line Co. has had authorization to build 25 miles of 6-inch line from this pool to connect with its trunk line in Hardeman County to the north, but has been holding up construction until more wells were completed and more producing area proven. Completion of this well, which make a quartet for the pool, will probably advance the plans for laying the line. Oil from the pool is now transported for Texas Co. from the Panhandle Field to the Gulf, through Gulf Pipe Line Co.'s main line within a short distance of the pool. Fifteen miles of 3-inch line carry gasoline from the company's casinghead gasoline plant near the wells to a gasoline loading rack to the southeast at Ford City. The company will probably make location for another test, which will be No. 7. The first two tests drilled on the 10,000-acre block did not prove producers.

Hardeman County

Paul Doran of Longview has been awarded contract to drill a 4,500-foot hole on a 10,000-acre block assembled by Jack E. Kelly, on which location was staked 1½ miles southwest of Quanah, in Hardeman County. Location is in the SW of Section 151, on the Jim Williams ranch. This county borders on Red River, and the location is an extreme wildcat.

J. D. Sandefer Jr., Breckenridge, Tex.

Production in the district for the week averaged 59,680 bbls. per day. There were 26 first reports and 19 completions registered, of which six were dry and abandoned. Next week's report will show a far greater number.

PANHANDLE DISTRICT

Phillips Petroleum Co. and others' No. 2 J. C. Wilson, in Section 157, Block 3, T.&N.O. Survey, northeastern Moore County, has been bottomed at 8,012 feet and is to be plugged back to make a gasser around 3,100 feet, where it picked up dry gas. Bottom of the hole is in the lower section of the Ordovician lime. Drilling provides valuable geological information as it is the deepest hole ever drilled in the Panhandle.

There were nine locations staked in the district this week, and eight tests

(Continued on Page 51)

Wildcat Operations in West Texas

Week Ended December 3

ANDREWS COUNTY

R. S. Bond et al's No. 1 McCarley, 1,320 ft. from N and W, Sec. 29, Blk. 3, P.S.L. Sur.
S.D. 5,001 ft.

Honolulu and Llano Oil Co.'s No. 1 J. E. Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur.
S.D. 4,780 ft.; plugged back 4,750 ft.; to shoot.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur.
S.D. 4,538 ft.

Humble Oil & Ref. Co.'s No. 2 Means, 1,980 ft. from S and 1,487 ft. from W, Sec. 4 Blk. A-19.
Plugged back to 4,562 ft. from 4,623 ft.; flowed 77 bbls. in 24 hours.

Humble Oil & Ref. Co.'s No. 2 Means, 660 ft. from N and 1,980 ft. from W, Sec. 11, Blk. A-35.
Drlg. 775 ft.; elev. 3,154 ft.

Humble Oil & Ref. Co.'s No. 3 Means, 1,980 ft. from S and 3,300 ft. from W, Sec. 4, Blk. C-45.
Elev. 3,168 ft.; rig.

York & Harper's No. 1 Hereford Stock Farms, C Labour 12, League 315, Parmer Co. school Lands.
Location.

BORDEN COUNTY

Moore Bros.' No. 1 Clayton & Johnson, 1,320 ft. N and E, Sec. 29, Blk. 33, Twp. 4n. T.&P. Sur.
Location.

BREWSTER COUNTY

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,290 ft. from E of Sec. 31, Blk. 352, W. M. Mitchell Sur.
S. D. 2,100 ft.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 22, G.H.&S.A. Sur.
S.D. 341 ft.

COCHRAN COUNTY

Kelsey's No. 1 Slaughter, C Labour 36, League 150, R.C.S. Lands.
Location.

West Texas Development Co.'s No. 1 Slaughter, near C of Labour 53, League 149, Randall Co. School Lands.
Derrick.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 340 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11.
S.D. 2,660 ft.

CRANE COUNTY

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur.
Cellar.

Loffland Bros. et al's No. 1 Tubbs.
T.D. 4,510 ft.

Strauss' No. 1 Phelps et al, 2,113 ft. from N and 713 ft. from NW Sec. 13, Blk. 31, H.&T.C. Sur.
S.D. 420 ft.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Drlg. 430 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
Drlg. 2,145 ft.

Wood et al's No. 1 Hall, 250 ft. from S and 85 ft. from E, Sec. 11, Blk. 54½, 16 miles N of Van Horn, P.S.L. Sur.
S.D. 246 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 3,300 ft.

ECTOR COUNTY

Amerada Pet. Co. et al's No. 1 Holt, 1,980

(Continued on Page 52)

West Tuleta Field Extended Toward Southwest; Open New Producing Horizon in Duval

SAN ANTONIO, Tex., Dec. 3.—The prospects of a half-mile southwest extension to the West Tuleta Field, Bee County, and the discovery of two new gas fields, one in northern Duval County, and one in Frio County, were the features in the Southwest Texas district the past week.

Heyser-Heard and Walton's No. 1 Perez, southwest of production in West Tuleta, topped the Pettus sand from 3,949-57 feet, which showed oil and is preparing to make a drill stem test. At 3,957 feet, the total depth, the test is reported to be about 25 feet low, but due to its high elevation, is thought to be high enough to make a well. Location is in Section 8. Two other wells in the field are due to be completed this week. Edwin M. Jones' No. 2 Skinner and Harris, an inside location, is preparing to cement casing at 3,933 feet after a drill stem indicated it would make a producer. It is bottomed at 3,943 feet. Whisenant and Trenchard's No. 1-B Rapp, inside the proven limits, blew out at 3,200 feet, but has been brought under control and is coring for the sand below 3,800 feet. Mills Bennett Production Co.'s No. 1 Martinson tested 10 thribbles of mud and oil and 10 thribbles of salt water in the Yegua sand. The operators have plugged back to the Pettus sand and will test from 3,896 to 3,901 feet. It is in the southwest extension area. Blanco Oil Co. and Buchanan have made location for No. 2 Perez, 330 feet from the south and east line of their 100-acre lease in the southwest part of the field.

Duval County

In northern Duval County, Magnolia Petroleum Co.'s No. 1 Labbe, a wildcat which tested considerable pressure on a drill stem made last week, has been completed at 2,460 feet for a 30,000,000-foot gas well, with rock pressure 885 pounds. It is 10 miles northeast of Government Wells Field and 8 miles east of the Eagle Hill Field. It opens a new producing horizon thought to be the Hockleyensis, although not definitely identified. The Government Wells Field is producing from 2,200 to 2,300 feet, while the Eagle Hill Field is producing from the Cole sand at 1,400 feet. The test is on a large block owned by Magnolia Petroleum Co. and Stanolind Oil & Gas Co. It is reported the Stanolind Oil & Gas Co. has made location near the discovery and will start operation within the near future.

Frio County

In Frio County, the deep wildcat test of Amerada Petroleum Corp., No. 2 Halff and Oppenheimer, 4 miles southwest of Pearsall, in the J. H. Gibson Survey, has been completed as a large gas well at a plugged depth of 3,950 feet. It was originally drilled to 10,050 feet where the drill pipe was stuck and the operators plugged back and perforated the casing from 3,936-50 feet. It was completed late in the week for an estimated 10,000,000 to 15,000,000 feet of gas daily and spraying about 20 bbls. of fluid daily, about one-fourth oil and the remainder thought to be wash water. This is one of the deepest tests drilled in the State, and it is the third test drilled on the company's block which it is reported contains approximately 85,000 acres extending in a long narrow fault line strip from the town of Pearsall, and extending into Zavalla County. The other wells drilled on the block were the company's No. 1 Halff and Oppenheimer and No. 1 Doering, abandoned after testing several formations below the Edwards lime.

Sam Fordyce Field

In the Sam Fordyce Field, interest is centered on three important outpost tests. T. L. Larsen, trustee's No. 1 G. G. Salinas and others, in Tract 10, Porcion 41, approximately 7,500 feet northeast of the discovery, made an eight-minute drill stem test at a reported depth of 2,700 feet and tested 100 pounds of pressure and is now drilling. Northwest of the discovery well over the line in Starr County, Alford Oil Co.'s No. 1 Flores, in the east 20 acres of Tract 250, Porcion 38, is reaming below 2,750 feet and should reach the pay over the week-end. If productive it will make a considerable extension. The third outpost test is Phillips Petroleum Co.'s No. 1 Seabury and others, 5,000 feet northwest of the discovery in Tract 246, Porcion 38. It is drilling below 1,500 feet and should reach the 1,800-foot gas sand within a few days.

Two tests have cemented casing on top of the sand, and should be tested this week. Heep Oil Corp.'s No. 2 Seabury and others, in the southeast 26 acres of Tract 256, Porcion 38, about 1,850 feet northwest of the discovery, topped the gas sand at 2,765 feet and cored to 2,772 feet. Saturation was picked up in sand at 2,775-80 feet and casing was cemented at 2,775 feet. Showers & Morcrief's No. 1-B John Lawrence, in the northeast 13.5 acres of Tract 274, Porcion 39, about 400 feet east of production, picked up the gas sand at 2,770-91 feet, and saturated sand at 2,800 feet, where casing has been cemented. It will probably be completed early in the week. Two tests are due to be recompleted this week. Navarro Oil Co.'s No. 1 Seabury and others, northwest of the discovery in Tract 256, Porcion 38, has been deepened to 2,794 feet and 5-inch casing was cemented in the lower 61 feet of the hole, 7 feet of slotted pipe being included at the lower extremity of the string. It is hoped the small string will shut off the high-pressure gas which prevented the well from making a producer when it was tested last week from 2,785-89 feet. Davis and Harrison's No. 1 Guerra, about a mile east of production in Tract 12, Porcion 41, has undertaken a similar job. Five-inch casing was cemented at 2,751 feet and production will be sought from the lower 4 feet of sand from 2,751 to 2,755 feet. The test showed for production two weeks ago, but high gas pressure above the sand prevented it from making a producer.

The county got two new locations during the week. Gholson Drilling Co. made location for No. 1 Felipe Farias, 330 feet from the north and 165 feet from the east line of Tract 273, Porcion 39, which adjoins the discovery block on the west. The other test, a wildcat, was made by Gato Oil Corp. for its No. 1 Brock and Showers, about 10 miles west of the town of Mission and 2 miles north of state highway No. 4 in Tract 8, Block 26, Porcion 79, Vista Hermosa Subdivision of Porciones 79-80, Ancient Jurisdiction of Reynosa.

Live Oak Field

In the McNeil Field, Live Oak County, Lion Oil & Refining Co.'s No. 2 McNeil was preparing to drill plugs in No. 2 McNeil. It topped the sand at 5,912 feet and it bottomed at 5,992 feet. On attempted drill stem test two weeks ago it showed an unusually high gas pressure and made considerable wet gas. Several unsuccessful drill stem tests have been attempted since, and the operators cemented casing at 5,860 feet after running an electrical coring test. If a producer it will open a new producing horizon for the Jackson Trend and a new sand in the field. The producing horizon is thought to be in the lower Yegua formation or the Cook Mountain. The discovery well is producing from the Hockleyensis at 4,360 feet, and it is reported No. 2 McNeil passed up this sand after making an unsuccessful drill stem test.

Jackson County

Atkins and O'Neil's No. 1 Hodges, a wildcat test in Jackson County, just north of the town of LaWard, has resumed drilling operations and is drilling below 1,200 feet after cementing surface casing at 1,150 feet. This is an important wildcat test, and is causing quite an active leasing campaign.

In the Seeligson Field, Jim Wells, Sinclair Prairie Oil Co.'s No. 1 Seeligson, the farthest southwest test in the field, is still on fire. It blew out of control and caught fire several weeks ago and efforts are being made to get it shut in, by drilling a deflected hole to pump mud and water through. In the same county, but in the Sandia Field, O. W. Killam has started his No. 3 Wade a half mile southwest of Larcro's No. 2 and is drilling below 1,600 feet.

Uvalde County

The wildcat test of Uvalde Oil & Refining Co. on the R. L. Anderson lease 3 miles east of the town of Uvalde, Uvalde County, has been abandoned at a total depth of 5,015 feet after it had failed to encounter any favorable showing of oil or gas. It is in the J. J. Guerra Survey No. 75. It is reported the company has made location for a test near the corners or Uvalde, Zavala, Frio and Medina Counties, to be drilled on the R. L. Ball and Company land, in the extreme northeast corner of Zavala County.

Banderia County

On the Edwards Plateau in Banderia County, W. B. Kyle and others have made location for No. 1 Duke in the J. A. Bennett Survey No. 7, approximately 13 miles southwest of Medina, and it is reported it may be carried to 6,000 feet.

Balcones Fault Zone

The Balcones Fault Zone area received locations for three wildcat tests. In Fayette County, Clark and others made location for No. 1 Becker, in the townsite area in the northern part of the county. In the same part of the county, Ross Fenton has made location for a 3,500-foot test in the Thomas Green Survey on a block of acreage extending east from the city limits of Warda. The other test in Guadalupe County, was made by Diamond Half Oil Co. for its No. 1 Schmidt in the Wakefield and Stewart Survey.

Karnes County

In the northwestern part of Karnes County, E. E. Green has made location for No. 1 Olive Henke in the Seguin grant, 1½ miles south of Falls City and west of Highway No. 16. Pacific Gas & Fuel Co., which recently completed No. 1 Choate for a gas well in a shallow sand, is making location for another test on the same lease. This new area is a little north of the North Pettus Field in the southern part of the county.

Wildcat Operations in Southwest Texas

Week Ending December 1

BANDERA COUNTY

W. B. Kyle et al's No. 1 Duke, 200 ft. NW line, 150 ft. SW line of J. A. Bennett Sur. No. 7.
Location.

Plateau Oil Co.'s No. 1, Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft from E lines of Sur. (8 mi. SW of Medina).
Drlg. 1,200 ft.

BASTROP COUNTY

Jim Harper's No. 1 Harris.
Location.

BEE COUNTY

Dirk Bros.' No. 1 Foley, N cor. of W. L. Foley tract, about 1 mile N of Simms' No. 1 Holzmark.
Location.

Arthur W. Gray's No. 1 Rutledge, 2,322 ft. from N line, 250 ft. from E line of 200-ac. tract in B. Q. Hadley Sur.
Location.

Cecil Hagan's No. 1 John R. Scott, 1½ mi. NE of Morgan test.
Spudded.

R. M. Herod's No. 5 Kimball, 810 ft. from E line, 150 ft. from N line of 110-ac. tract in S. Winship Sur.
Derrick.

Bill Hindeman's No. 1 Imogene Hall, 2,310 ft. along NW line of S½ of H. W. Fontaine Sur., thence at R/A 1,362 ft.
Location abd.

Wm. F. Morgan et al's No. 1 Hicks & Hall. Sec. 42 (Normanna area).
Swbng. 3,638 ft.; preparing to put on pump.

Humble O. & R. Co.'s No. 1 Daniel Fox, 7,500 ft. from N line, 3,170 ft. from E line of 1,384-ac. tract in M. Fox Sur.
Drlg. 2,515 ft.

Mid-Continent Cruce Oil Co.'s No. 2 Kimball (Grayburg area).
P.B. to upper sand; depth not reported.

R. J. Worthington et al's No. 1 Rutledge, 1,000 ft. from N line and 200 ft. from E line of A. Hadley Sur.
T.D. 3,434 ft.; running csg.

BEXAR COUNTY

Dr. Dickens' No. 1 Victor Golla, 150 ft. NW line and 150 ft. NE line of Cardines No. 25 Sur.
Abd. 530 ft.

Jones & Kieffer's No. 1 LaGrane, NW cor. of tract, 310 ft. each way, F. Rolen Sur.
Drlg. 155 ft.

McFee & Briggs' No. 1 Lamb, 9,200 ft. from S line, 300 ft. W line, Manvel Deluna Sur. No. 3, Tract A. & B.
Abd. 1,065 ft.

Geo. O'Neill et al's No. 1 Salek Cherniarsky, E of Eckert Field.
Drlg. 970 ft.

R. Y. Walker's No. 1 L. A. Hamilton, 550 ft. SE and NW cor, 1,110 ft. NE of NW line of tract, Blk. 4,007.
Drlg. 910 ft.

BROOKS COUNTY

Helmerich & Payne's No. 1 Scott and Hooper, Palo Alto y Guerra grant.
Location.

CALDWELL COUNTY

Anderson's No. 1 Perry, 330 ft. SE and NE lines of 27-ac. tract, Giddeon Pace Sur.
Abd. 1,955 ft.

O. Dawn's No. 1 F. Tiller, 250 ft. from N line, 1,000 ft. from E line of 37-ac. tract, in G. Hinds Sur.
Drlg. 1,995 ft. (corrected depth).

F. P. Hynes et al's No. 1 Tramwell, 750 ft. from SE line and 330 ft. from NE line of tract in Ester Berry Sur.
Abd. 2,195 ft.

Kurz Oil Co.'s No. 1 Kurz ranch fee, 4,000 ft. SW line and 4,300 ft. SE line of Barnard Klecamp Sur.
Drlg. 3,850 ft.; no report.

F. Meyers' No. 1 Mooney, 250 ft. from road, 330 ft. from middle of SE cor. of 103-ac. tract, Seale Sur.
Derrick.

Stanley Smith's No. 1 J. C. Copeland, about 4 miles SW of Lockhart and beyond the Mebana Estate.
Setting up machinery.

(Continued on Page 53)

SOUTHWEST TEXAS PRODUCTION

Daily average for the week ending November 30:

SAN ANTONIO DISTRICT

Pool and county—	Bbls.
Darst Creek, Guadalupe	8,960
Luling, Caldwell	5,368
Salt Flat (Brunner), Caldwell	3,945
All other pools	4,579
Total San Antonio district	22,852

LAREDO DISTRICT

Pool and county—	Bbls.
Cole, Webb-Duval	1,353
Escobas, Zapata	2,402
Government Wells, Duval	24,288
Sam Fordyce, Hidalgo	2,000
All other pools	66,374
Total Laredo district	32,333
Total San Antonio district	22,852
Total Southwest Texas	59,184

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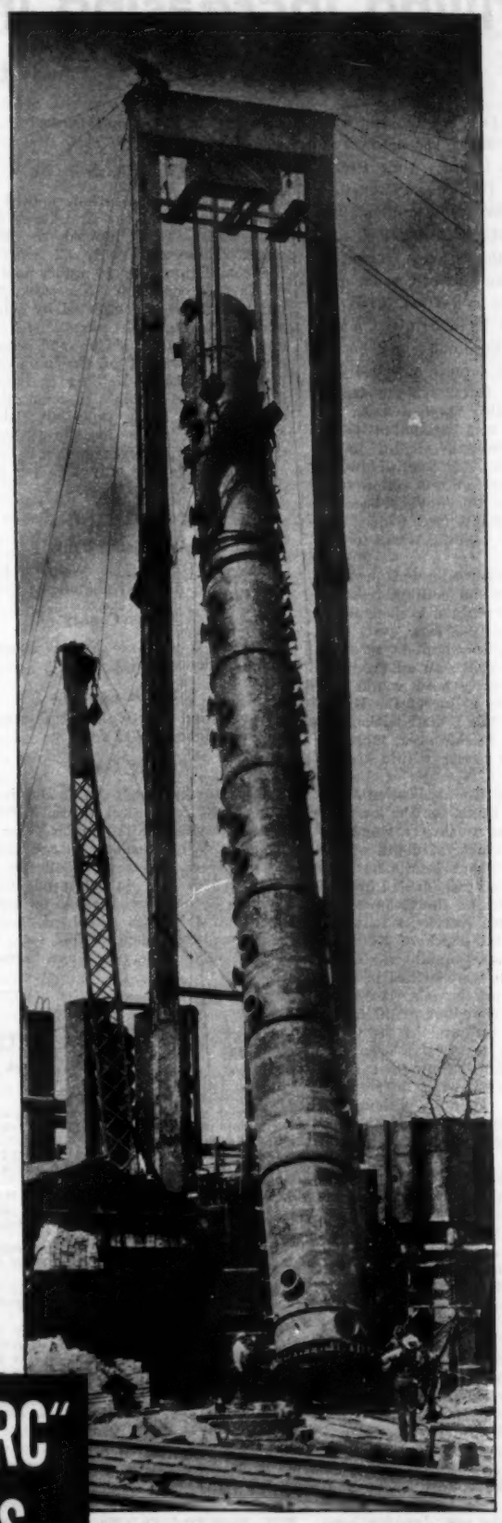

New fractionating tower, 110 feet high, welded with "Shield-Arcs" by The Struthers Wells-Titusville Corp., Warren and Titusville, Pa.

LINCOLN "SHIELD-ARC" WELDERS

Anderson County Test Is Still Not Encouraging; Drilling Increasing in the East Texas District

By L. E. BREDBERG

DALLAS, Tex., Dec. 3.—The test which last week showed for a gas discovery in eastern Anderson County, Gulf Production Co.'s No. 1 Davey and Royall, in the M. Rogers Survey, approximately 7 miles southeast of Palestine, has cored to 5,189 feet without much encouragement. However, some lignitic sand, cored from 5,180-85 feet and from 5,185 feet to the total depth is to be given a drill stem test. The Woodbine sand horizon was first reported topped at 5,054 feet. Elevation is 574 feet, and the test is running considerably higher than the Byrd and Frost and Stanolind Oil & Gas Co.'s two "dusters" drilled to the south near Slocum, this year. However, the first Woodbine top was found to be erroneous, another top having been reported logged at 5,176 feet. This places the Woodbine top at minus 4,652 feet on subsea datum.

If nothing shows, tools will probably be run in the hole and drilling resumed. It will no doubt be plugged back to where it struck a heavy gas flow last week from 5,041-66 feet, to complete as a gas well if it does not prove an oil producer. A gas producing area here would perhaps be tied into by a line of the United Gas System which has a distribution system serving towns in this area, including Palestine. The line passes within a short distance.

Owenby Drilling Co. and others' No. 1 Elkhart State Bank, a shallow test drilled about 2 miles southwest, was abandoned this week at a total depth of 810 feet. Another test, about 1 mile north of the Davey and Royall test, drilled by Neil McDowell and others on the Camp lands, in the J. Swearingen Survey, was tested this week at a total depth of 371 feet, but showed no signs of making a shallow producer. Both tests were drilled in quest of production from the Carrizo sand, which logged good showings of oil in the Davey and Royall test and in the Camp test. Other shallow tests have been proposed, but with one shallow test abandoned, and another showing no signs of making a Carrizo producer, although it had previously showed considerable oil when tested, the proposed tests may not be drilled.

Two more dry holes have blotted the possibilities for production in many areas. Bryant and Spear's No. 1 Jones, in the J. Compton Survey, Rains County, was given up at 1,800 feet as dry, and Nenny and others' No. 1 Coulter, in the Maria Estrada Survey, 2 miles northwest of Sand Flat, in Smith County, was bottomed at 4,407 feet before plugging orders were given.

Only one location was made for a wildcat in the district this week. Abercrombie and Harrison are to drill a Woodbine test on the Bowen and Grant lands, in the Midkiff Survey, between 6 and 7 miles northwest of Clarksville, in Red River County. There is only one other location in the county at present, with none drilling.

Several more tests are due for completion, either as discoveries or more dry holes. There are 13 in this status now, but several are shut down and may remain so indefinitely.

There are only 49 wildcats on the active list in the East Texas district, including locations, tests shut down temporarily and those drilling. They are interspersed among 18 counties from the north line of Angelina County to the Red River. This district does not take in a tier of counties on the extreme east side of the State and bordering on the Louisiana line.

EAST TEXAS FIELD

There were 63 locations staked in the East Texas Field the first three days of this week. They jumped to 108 last week. There were only 62 reported on the completion list, 10 under last week. Of the 62 completed this week, 6 were pumpers, 3 were completed by swabbing, and air and gas lift was used in producing 2 others. Major and semimajor companies own 26 of the number completed this week. Drilling activities are increasing due possibly to some operators desiring more crude, especially those connected with some local refinery that needs more oil. Each well will now be allowed to produce only 3.45 per cent of its hourly potential flow.

COMPLETIONS

Anderson County

Owenby Drilling Co.'s No. 1 Elkhart State Bank, dry and abandoned 810 feet.

Rains County

Bryant & Spear's No. 1 Jones, dry and abandoned 1,800 feet.

Smith County

Nenny and others' No. 1 Coulter, dry and abandoned 4,407 feet.

Gregg County

Alco Royalty Co.'s No. 2-B King, top sand 3,620 feet, total depth 3,663 feet, initial production 165 bbls. per hour through 2½-inch tubing. Bond Dillard's No. 8 Myers, top sand 3,543 feet, total depth 3,570 feet, initial production 50 bbls. in 30 minutes through 2-inch tubing. Gulf's No. 38 Shepherd, top sand 3,477 feet, total depth 3,507 feet, initial production 65 bbls. per hour through 2-inch tubing. Humble's No. 6 Adams, top sand 3,433 feet, total depth 3,467 feet, initial production 23 bbls. per hour through 2-inch tubing; No. 8 Clements, top sand 3,643 feet, total depth 3,679 feet, initial production 20 bbls. in 15 minutes through 2-inch tubing; No. 24 Holland, top sand 3,616 feet, total depth 3,648 feet, initial production 131 bbls. per hour through 2-inch choke. Hobart Key Estate's No. 1 fee, top sand 3,532 feet, total depth 3,551 feet feet, initial production 125 bbls. per hour through 2½-inch tubing.

Magnolia's No. 20 Everett, top sand 3,668 feet, total depth 3,673 feet, initial production 142 bbls. per hour through 2-inch choke; No. 14 Foster, top sand 3,487 feet, total depth 3,525 feet, initial production 120 bbls. per hour through 2-inch choke. Shell's No. 10 Fishburn, top sand 3,488 feet, total depth 3,547 feet, initial production 45 bbls. in 30 minutes through 2½-inch tubing. Stanolind-Simms' No. 17 Persons, top sand 3,462 feet, total depth 3,516 feet, initial production 100 bbls. per hour through 2-inch tubing; No. 18 Persons, top sand 3,467 feet, total depth 3,530 feet, initial production 53 bbls. in 30 minutes through 2-inch tubing; No. 19 Persons, top sand 3,471 feet, total depth 3,535 feet, initial production 150 bbls. per hour through 2-inch tubing; No. 20 Persons, top sand 3,479 feet, total depth 3,535 feet, initial production 23 bbls. in 15 minutes through 2-inch tubing. Turnbow Petroleum Co.'s No. 1 McGrede, top sand 3,632 feet, total depth 3,690 feet, initial production 80 bbls. in 30 minutes through 2½-inch tubing.

Tysco Oil Co.'s No. 5 Anderson, top sand 3,488 feet, total depth 3,521 feet, initial production 75 bbls. per hour through three-quarters inch choke on tubing. Yount Lee's No. 8 F. Smith, top sand 3,554 feet, total depth 3,574 feet, initial production 60 bbls. per hour through eleven-sixteenths inch choke; No. 6 Snoddy, top sand 3,593 feet, total depth 3,613 feet, initial production 60 bbls. per hour through eleven-sixteenths inch choke. Gulf's No. 20 Holt, top sand 3,582 feet, total depth 3,597 feet, initial production 88 bbls. per hour through 2-inch tubing. H. L. Lockhart's No. 1 Weiss, top sand 3,630 feet, total depth 3,656 feet, initial production 110 bbls. per hour through 2-inch tubing. McAllister Oil Co.'s No. 1-M Sabine River, Tract No. 7, top sand 3,484 feet, total depth 3,498 feet, initial production 90 bbls. per hour through 2½-inch tubing.

Tom Potter et al's No. 1 Daniel Thompson, top sand 3,541 feet, total depth 3,553 feet, initial production 20 bbls. in three hours on air lift. Harry Schulman's No. 2 Dorris, top sand 3,495 feet, total depth 3,550 feet, initial production 20 bbls. in five hours' pumping. Shell's No. 6 Bonner, top sand 3,547 feet, total depth 3,596 feet, initial production 40 bbls. per hour through 2-inch tubing. Sun Oil Co.'s No. 12 Rees, top sand 3,688 feet, total depth 3,690 feet, initial production 43 bbls. per hour through 2-inch tubing. Thurman-Lipscomb's No. 1 Martin, top sand 3,647 feet, total depth 3,649 feet, initial production 90 bbls. per hour through 2-inch tubing. Tide Water Oil Co.'s No. 11 Blackman, top sand 3,637 feet, total depth 3,650 feet, initial production 15 bbls. in 10 minutes through 2-inch tubing.

Rusk County

J. Beren's No. 1 Britton, top sand 3,670 feet, total depth 3,620 feet, initial production 21 bbls. per hour through 2-inch tubing. Bowles Oil Co.'s No. 11 Wells, top sand 3,670 feet, total depth 3,700 feet, initial production 75 bbls. per hour through 2-inch tubing. Gulf's No. 8 Russell, top sand 3,580 feet, total depth 3,615 feet, initial production 29 bbls. in 20 minutes through 2-inch tubing. Humble's No. 125 Crim, top sand 3,675 feet, total depth 3,720 feet, initial production 102 bbls. per hour through 2½-inch tubing; No. 130 Crim, top sand 3,658 feet, total depth 3,710 feet, initial production 192 bbls. per hour through 2-inch choke; No. 12-A B. F. Laird, top sand 3,608 feet, total depth 3,635 feet, initial production 120 bbls. per hour through 2½-inch tubing; No. 30 Peterson, top sand 3,634 feet, total depth 3,634 feet, initial production 80 bbls. per hour through 2-inch choke.

Grady Vaughn and others' No. 2 Sexton, top sand 3,616 feet, total depth 3,700 feet, in lime, initial production 22 bbls. in 2 hours through 2½-inch tubing. Burwin Oil Co.'s No. 4 Smith, top sand 3,608 feet, total depth 3,690 feet, in shale, initial production swabbed 20 bbls. in six hours; No. 5 Smith, top sand 3,590 feet, total depth 3,738 feet, initial production swabbed 26 bbls. in four hours. Carter and others' No. 1 Frederick, top sand 3,535 feet, total depth 3,650 feet, initial production swabbing 15 bbls. per hour. W. J. Collins' No. 3 Ras Redwine, top sand 3,535 feet, total depth 3,580 feet, in shale, initial production 20 bbls. an hour by heads through 2-inch tubing. Gant-Garvin-Weggener's No. 17 Moore, top sand 3,525 feet, total depth 3,630 feet, in shale, initial production 25 bbls. per hour through 2-inch tubing.

Hammond Oil Co.'s No. 2 Pool, top sand 3,785 feet, total depth 3,800 feet, initial production 55 bbls. hourly, 2-inch tubing. Haynes Drilling Co.'s No. 9 Brown top sand 3,677 feet, total depth 3,717 feet, in sandy shale, initial

East Central Texas Wildcats

Week Ending December 1

ANDERSON COUNTY

Gulf Prod. Co.'s No. 1 Dovey & Royall, 330 ft. from NE and NW of 172-ac. tract, M. Rogers Sur.
Cored 5,171-80 ft.; recovered 9 ft.; 5 ft. black shale, 2 ft. gray sandy shale, 2 ft. brown shale; coring ahead.

J. W. Luttes' No. 1 C. McKee, 2,640 ft. from N line of lease and survey and 330 ft. from W line of McKey 800-ac. tract.
Derrick.

Neil & McDowell et al's No. 1 Camp, 395 ft. from S and 150 ft. from E of SE 40 acres in J. Swearingen Sur.
Top Carrizo 362 ft.; T.D. 375 ft.; to let stand and test; showed nothing before deepening.

Trinity State Oil Co.'s No. 1 Trinity River, 1,870 ft. N and 1,200 ft. W of SW cor. of Sullenberger lands, Wm. Snyder Sur.
Set csg. 640 ft.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Rigged up.

CHEROKEE COUNTY

J. B. Daniels' No. 1 Soutnern Pine Lbr. Co., 4,000 ft. N and 150 ft. W of SE cor. of Thompson Sur.
Rigged up.

H. L. Hunt Prod. Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Jacksonville O. & G. Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
T.D. 752 ft.

South Gulf Oil Co.'s No. 1 Joe Bailey, center 164-ac. tract, 4 miles NE of Ponta, L. R. Rhodes Sur., Abstract No. 724.
T.D. 4,396 ft.; P.B. 4,183 ft.; S.D.

E. M. Thomason et al's No. 1 Addis Estate, 250 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto.
S.D. 2,150 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,550 ft.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 1,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur.
S.D. 305 ft.

FREESTONE COUNTY

Burris' No. 1 R. J. Johnson, NE cor. of a 95.5-ac. tract, W. M. C. Jones Sur.
S.D. 1,000 ft.

Hailey-Young's No. 1 Cochran, 400 ft. N and W lines, D. Bullock Sur., 1 mile SE of Lima.
Location.

GREGG COUNTY

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview.
Drlg. 1,220 ft.

HARRISON COUNTY

W. G. Boyd et al's No. 1 W. L. Rudd, no check; in sec. of 360-ac. tract and sur., W. D. Perry Sur.
Elev. 316 ft.; fishing 1,630 ft.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
Skidding derrick.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malahoff and S of Railroad, George Aldrick Sur.
S.D. 4,107 ft. (corrected).

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Gros, A. Caro Sur.
S.D. 1,485 ft.

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production 60 bbls. per hour through 2½-inch tubing. Humble's No. 6 Alexander, top sand 3,647 feet, total depth 3,719 feet, in shale, initial production 12 bbls. per hour on gas lift on 2-inch choke; No. 36-A Plowman, top sand 3,664-84 feet, total depth 3,693 feet, initial production 60 bbls. in 30 minutes through 2-inch choke. Jenkins Oil Co.'s No. 22 Jobe, top sand 3,524 feet, total depth 3,620 feet, in shale, initial production 200 bbls. in six hours' pumping. Lide-Tayloe's No. 6 Young, top sand 3,660 feet, total depth 3,720 feet, initial production 90 bbls. per hour through 2-inch tubing. Tom Looney's No. 2 D. Bradford, top sand 3,565 feet, total depth 3,623 feet, in lime, initial production 5 bbls. in 10 minutes through 2-inch tubing.

C. H. Lyons' No. 5 Moore Estate, top sand 3,550-60 feet, total depth 3,611 feet, in shale, initial production 20 bbls. per hour on 2-inch tubing. Marathon Oil Co.'s No. 15 Ledbetter, top sand 3,675 feet, total depth 3,678 feet, initial production 98 bbls. per hour through 2½-inch tubing; No. 11 Mason, top sand 3,607 feet, total depth 3,667 feet, in shale, initial production 20 bbls. in three hours; No. 1 Overton, top sand 3,616 feet, total depth 3,618 feet, initial production 80 bbls. per hour through 2-inch tubing. Murray and others' No. 2 Arnold, location abandoned. Petroleum Marketing Co.'s No. 2 Frederick, top sand 3,565 feet, total depth 3,640 feet, in shale, initial production 20 bbls. per day, pumping. Phillips-Bennett's No. 2 Alford, top sand 3,605 feet, broken, total depth 3,730 feet, in shale, initial production 20 bbls. in three hours, pumping. Shell Petroleum Corp.'s No. 5 Jobe, top sand 3,592-3,651 feet, total depth 3,700 feet, in shale, initial production 29 bbls. in 30 minutes through 2½-inch tubing. Tex-Jersey Co.'s No. 6-A Keeling, top sand 3,755 feet, total depth 3,795 feet, initial production 55 bbls. in 40 minutes through 1-inch choke. Wainwright-West's No. 2-B Pinkston, top sand 3,637 feet, total depth 3,660 feet, initial production 45 bbls. per hour through 2-inch tubing.

Smith County

Johnson-Owens' No. 5 Jackson, top sand 3,758 feet, total depth 3,760 feet, initial production 100 bbls. per hour through 2-inch tubing. K. O. T. Oil Co.'s No. 9-A Cook, top sand 3,554 feet, total depth 3,756 feet, initial production 30 bbls. in 30 minutes through 2-inch choke. Texokana Oil Co.'s No. 5 Wright, location abandoned. Trentman-West's No. 2 Jackson, top sand 3,775 feet, total depth 3,778 feet, initial production 75 bbls. per hour through 2-inch tubing.

Upshur County

Fla-Tex Corp.'s (formerly J. L. Meek) No. 2 Jones, top sand 3,744 feet, total depth 3,765 feet, initial production 110 bbls. in 24 hours. Oils, Inc.'s No. 10 Sanders, top sand 3,642 feet, total depth 3,647 feet, initial production 60 bbls. per hour through 2-inch tubing. Stroube & Stroube's No. 19 Mackey, top sand 3,632 feet, total depth 3,639 feet, initial production 35 bbls. per hour through 2-inch tubing.

West Texas Fields

(Continued from Page 47

completed, only one of which was a dry hole. Production for the week averaged 59,820 bbls. per day, or an increase of 3,793 bbls. per day over the previous week.

COMPLETIONS IN RANGER (WEST CENTRAL TEXAS) DISTRICT

Brown County

Herring's No. 1 Tullos, dry and abandoned at 1,215 feet. Martin & Son's No. 1 Mathews, dry and abandoned at 956 feet. Putman Oil Co.'s No. 1 Cole, dry and abandoned at 1,180 feet.

Eastland County

Lone Star Gasoline Co.'s No. 3 fee, total depth 3,584 feet, initial production 25 bbls. oil and 1,140,000 feet of gas. McDonald Receivers' No. 5 Turner, total depth 1,327 feet, initial production 50 bbls.

Coleman County

Anzac Oil Corp.'s No. 3-A Allen, dry and abandoned at 1,136 feet. Engle & Semmes' No. 1 Stewardson, total depth 1,462 feet, shot with five quarts; initial production 18 bbls.

Palo Pinto County

International Petroleum Corp.'s No. 1 Carter, dry and abandoned at 2,512 feet. States Oil Corp.'s No. 4 Allen & Ritchie, total depth 1,795 feet, initial production 20 bbls.

Shackelford County

Poly Oil Co. and others' No. 8 Spears, dry and abandoned at 770 feet. Putman Supply Co.'s No. 3 Morris & Buie, total depth 1,720 feet, plugged back to 1,634 feet; initial production 20 bbls. Reliance Oil & Royalty Co.'s No. 3 Dillar Brothers, total depth 525 feet, shot 30 quarts, initial production 3 bbls. Roeser & Pendleton's No. 1-196 Dawson and others, dry and abandoned at 1,866 feet. Roeser & Pendleton and Humble Oil & Refining Co.'s No. 17-201 Morris and Buie, total depth 1,598 feet; initial production 30 bbls. Tannehill and others' No. 21 Matthews, total depth 1,122 feet, shot with 15 quarts, initial production 30 bbls. Walker's No. 5 Walker, dry and abandoned at 465 feet.

Throckmorton County

Fares Production Co.'s No. 10 Graham, total depth 3,892 feet, initial production 17 bbls. oil and 200 bbls. salt water.

COMPLETIONS IN WEST TEXAS

Ector County

Stanolind Oil & Gas Co.'s No. 12 Cowden, total depth 4,260 feet, shot with 330 quarts from 4,177-4,260 feet, initial production 445 bbls.

Fisher County

Texas Co.'s No. 1 First National Bank of Rotan, dry and abandoned 3,226 feet.

Glasscock County

Luce & Pickens' No. 1 Lee, top pay 2,186 feet, total depth 2,188 feet, initial production 57 bbls., pumping.

Irion County

Melrose Oil Co.'s No. 1 Suggs, temporarily abandoned 175 feet.

Jones County

Moutray Oil Co. and Byram's No. 1 Ray, dry and abandoned 2,321 feet.

Regan County

Kirschner & White's No. 1 White, temporarily abandoned 3,164 feet.

Runnels County

Golden Petroleum Corp.'s No. 5 McMillan, top pay 2,513 feet, total depth 2,514 feet, initial production 50 bbls. per day, pumping.

Upton County

Gulf Production Co.'s No. 11 Crier-McElroy, total depth 2,883 feet, initial production 98 bbls.

Ward County

California Co.'s No. 14-A York, top pay 2,398 feet, total depth 2,525 feet, initial production 140 bbls.; No. 15 Durgin, total depth 2,559 feet, initial production 2,950 bbls. Richardson's No. 9-B Johnson, top pay 2,299 feet, total depth 2,580 feet, initial production 1,068 bbls.

COMPLETIONS IN PANHANDLE

Gray County

Christy and others' No. 1 Gethings, top pay 2,669 feet, total depth 2,679 feet, shot with 100 quarts from 2,557-2,675 feet, initial production 150 bbls. pumping. Empire Gas & Fuel Co.'s No. 3 Bender, top pay 3,172 feet, total depth 3,240 feet, shot with 300 quarts from 3,155-3,532 feet, initial production 266 bbls. pumping. Sulloch Oil Co.'s No. 4 Morse, top pay 2,562 feet, total depth 2,642 feet, shot with 320 quarts from 2,540-2,640 feet, initial production 200 bbls. pumping.

Hutchinson County

Huber Petroleum Co.'s No. 2 Dunaway, gas pay 2,280 feet, total depth 2,620 feet, initial production 13,000,000 feet of gas; No. 3-C Mayer-Johnson, abandoned 2,550 feet. Texas Plains Oil Co.'s No. 1 Watkins, top pay 2,925 feet, total depth 2,984 feet, shot with 350 quarts from 2,885-2,984 feet, initial production 524 bbls. pumping. U-Tex Oil Co.'s No. 1-B Ware, top pay 3,040 feet, total depth 3,075 feet, shot with 270 quarts from 2,990-3,070 feet, initial production 313 bbls. pumping; (formerly Reiger and others).

Moore County

Sunray Oil Co.'s No. 2-A Jones, top pay 3,349 feet, total depth 3,352 feet, initial production 28 bbls., 50 per cent water.

COMPLETIONS IN WICHITA FALLS

Archer County

Hamilton's No. 23 Pace, top pay 1,163 feet, total depth 1,172 feet, initial production 100 bbls. Fain-McGaha and Humble Oil & Refining Co.'s No. 44 Logan, top pay 1,105 feet, total depth 1,108 feet, initial production 125 bbls. Kittery Oil Co.'s No. 6 Carr, top pay 1,389 feet, total depth 1,398 feet, initial production 120 bbls. Perkins and Culum's No. 121 Falls County, top pay 1,118 feet, total depth 1,130 feet, initial production 70 bbls.; No. 116 Falls-Titken, top pay 1,109 feet, total depth 1,130 feet, initial production 55 bbls.

Cooke County

Texas Co.'s No. 4 Dennis, dry and abandoned 1,514 feet.

Montague County

Beck's No. 9 Davenport, top pay 1,724 feet, total depth 1,734 feet, initial production 300 bbls. Bridwell Oil Co.'s No. 4 Gist, top pay 1,251 feet, total depth 1,254 feet, initial production 50 bbls.

Wichita County

Burns' No. 7 Bailey, top pay 1,330 feet, total depth 1,334 feet, initial production 10 bbls. Hull's No. 9-E Burnett, dry and abandoned 886 feet. King Royalty Co.'s No. 1-S Waggoner, top pay 1,550 feet, total depth 1,557 feet, initial production 75 bbls. John O'Neal's No. 1 Burnett, dry and abandoned 884 feet. Perski's No. 2 Foster and Allen, dry and abandoned 1,000 feet. Reed, Glass & Crenshaw's No. 1-B Allen and Demp, dry and abandoned 464 feet. Turner's No. 1 Robinson, dry and abandoned 1,350 feet.

Young County

Knight Oil Corp. and others' No. 4 Hamilton, top pay 864 feet, total depth 868 feet, initial production 300 bbls. Medico Oil Co.'s No. 3 Lasley, top pay 913 feet, total depth 943 feet, initial production 30 bbls. Honea's No. 7 fee, top pay 404 feet, total depth 425 feet, initial production 15 bbls. Cato and others' No. 1 Hamilton, top pay 883 feet, total depth 930 feet, initial production 10 bbls.

One Per Cent Deduction for Strappage in Texas

AUSTIN, Tex., Dec. 1.—The Texas Railroad Commission has rescinded an allowance of 1 per cent which pipe lines were permitted to deduct from crude oil runs for strappage.

Rule No. 9, Oil and Gas Circular No. 10, regulating pipe line carriers, was amended to read:

All oil tendered pipe lines for transportation shall be gauged and tested by a representative of the pipe line prior to its receipt from the shipper; the shipper shall at all times have the privilege of being present or represented at the gauging and testing. Quantities shall be computed from correctly compiled tank tables showing 100 per cent of the full capacity of the tanks in all oil fields of Texas. Corrections may be made for temperature, allowing or deducting at the rate of 1 per cent for every 25 degrees in temperature below or above 60 degrees Fahrenheit. Pipe lines may deduct the full per cent of the basic sediment, water and other impurities as the centrifugal or other tests agreed upon may show.

A further deduction of 1 per cent for evaporation and loss during transportation shall be made, and the net balance shall be the quantity deliverable by the pipe line. In allowing the deductions set out in this rule it is not the intention of this commission to affect any tax or royalty obligation imposed by the laws of Texas on any producer or shipper of oil.

Major Companies Turn to Aviation Grade Gasoline

(Continued from Page 13)

4. Gives a 54 per cent faster warm-up than the old Esso.

5. Solvent oil content reduces repair bills by keeping the valves and piston rings clean and working smoothly.

6. Low gum content. Less than 3 milligrams to 100 c.c.

7. Giant power is instantly available. It shot a car 85 feet beyond the mark attained by the old Esso in 40 seconds.

The claims in regard to quick starting and pickup are based on actual tests in cars. The octane rating of 78 is two numbers over the minimum requirements of the Ethyl Gasoline Corp. for Ethyl Gasoline.

The use of the solvent oil is claimed as an exclusive feature (patented) differing from the top cylinder lubricants and other lubricants which have been used by several companies over the past three years. The old Esso contained this nonviscous oil and its continued use is said to be based on exhaustive investigations both by the company and outside concerns. The case of a large bus operator in New York is cited in which the concern started out by using the solvent treated gasoline in a few buses and after checking results now uses it with all buses.

In regard to the solvent, the company does not claim lubricating properties but justifies its use due to its contribution to the chemical stability of the gasoline stating that it improves car performance and reduces repair bills of car owners by dissolving gum, and resinous and asphaltic deposits which form on valves, pistons and rings.

The vapor pressure of the fuel for winter use is 11 pounds.

Cost of Base Fuel

Refinery operators will realize immediately that the new fuel means higher costs. Without considering antiknock properties, a gasoline having the distillation characteristics of a gasoline comparable to the new Esso, will bring approximately one-half cent a gallon more based on tank car quotations at refineries. This higher price is justified on the reduced yields of gasoline. Just how much of a reduction in yield from crude oil such a gasoline with its large percentage of light fractions and the small percentage of the heavier ends will mean will of course vary with different companies depending on the crudes refined, the method of processing and the availability of natural gasolines. It is certain, however, that production costs at all refineries would be substantially higher than in the production of gasolines now commonly sold to the domestic trade.

The fact that a volatile motor fuel is used as a base with small quantities of the heavier ends will tend to increase the antiknock rating of the base fuels. Due to this fact it is probable that in increasing the octane rating from 76 to 78 very little if any additional ethyl fluid will be required in the new fuel. The solvent oil used amounts to one-half to three-quarters of 1 per cent of the total and is expensive.

Bears Out Research Work

Those within and outside the industry who have been carrying on investigations

in recent years covering the relation of volatility to gasoline performance will be especially interested in the new fuels. The use of more volatile fuels is in line with the findings of the Natural Gasoline Association of America which under the direction of Dr. G. G. Brown of the University of Michigan has done a tremendous amount of research work tending to show the desirability of using the lighter fractions available from natural gasoline plants and the gasoline recovery plants of refineries, in motor fuels. Recent reports of Doctor Brown and his associates have been especially convincing in this regard. Largely due to this work some car manufacturers have been persuaded to design their engines in order to permit the use of more volatile fuels. As has been pointed out by those in a position to know, a more general recognition of this situation by both the automobile and oil industries will result in all fuels being more volatile and this in turn will provide profitable outlets for the lighter fractions available at natural gasoline plants and refineries now partially wasted.

CRUDE PRICES

Pennsylvania Grade Crude

Date—			Price
1914	Jan.	1	$2.50
	Apr.	17	2.40
	Apr.	20	2.30
	Apr.	22	2.20
	Apr.	27	2.10
	Apr.	30	2.00
	May	11	1.90
	June	1	1.80
	June	16	1.75
	July	15	1.70
	July	23	1.65
	Aug.	3	1.60
	Aug.	12	1.55
	Aug.	17	1.50
	Aug.	20	1.45
	Dec.	4	1.50
1915	Mar.	16	1.45
	Mar.	20	1.40
	Apr.	3	1.35
	Aug.	13	1.45
	Aug.	17	1.55
	Aug.	24	1.60
	Sept.	13	1.65
	Sept.	27	1.70
	Oct.	7	1.75
	Oct.	27	1.80
	Nov.	5	1.85
	Nov.	15	1.90
	Nov.	18	2.00
	Dec.	3	2.10
	Dec.	17	2.15
	Dec.	30	2.25
1916	Jan.	28	2.35
	Feb.	21	2.40
	Mar.	6	2.50
	Mar.	17	2.60
	July	28	2.50
	Aug.	3	2.40
	Aug.	8	2.35
	Aug.	15	2.30
	Sept.	28	2.40
	Oct.	10	2.50
	Oct.	20	2.60
	Dec.	5	2.75
	Dec.	29	2.85
1917	Jan.	5	2.95
	Jan.	9	3.05
	Apr.	17	3.10
	Aug.	13	3.25
	Aug.	20	3.50
	Dec.	4	3.75
1918	Feb.	3	4.00
1919	Sept.	2	4.25
	Nov.	7	4.50
	Dec.	22	4.75
	Dec.	31	5.00
1920	Jan.	26	5.25
	Feb.	5	5.50
	Feb.	17	5.65
	Feb.	27	5.80
	Mar.	1	5.95
	Mar.	2	6.10
1921	Jan.	8	5.75
	Jan.	21	5.50
	Feb.	4	4.75
	Feb.	11	4.25
	Feb.	15	3.75
	Feb.	21	3.25
	Feb.	26	3.00
	Apr.	18	3.25
	Apr.	25	3.50
	May	19	3.25
	May	25	3.00
	June	14	2.75
	June	16	2.50
	June	28	2.25
	Sept.	27	2.50
	Oct.	4	2.75
	Oct.	7	3.00
	Oct.	14	3.25
	Oct.	20	3.50
	Nov.	2	4.00
1922	Jan.	3	3.50
	Jan.	9	3.25
	June	5	3.50
	July	17	3.25
	July	19	3.00
	Dec.	30	3.25
1923	Jan.	16	3.35
	Jan.	18	3.45
	Jan.	29	3.55

West Texas Wildcats

(Continued from Page 47)

ft. from S and E, Sec. 20, Blk. A. Location.

Black et al's No. 1 Connell, 330 ft. from S and 2,310 ft. from W, Sec. 1, Blk. B-16, P.S.L. Sur.
S.D. 3,327 ft.

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,300 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Drlg. 3,075 ft.

Landreth Prod. Co.'s No. 1 Johnson, 440 ft. from N and W, Sec. 47, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,662 ft.

Landreth Prod. Co.'s No. 1 Clarence Scherbauer, 660 ft. from S and E. lines of Sec. 30, Blk. 44, Twp. 1n. T.&P. Sur.
T.D. 4,236 ft.; plugged back to 4,186 ft.

Shell Pet. Corp.'s No. 1 Connell, 1,980 ft. from N and 660 ft. from E. Sec. 12, Blk. B-16, P.S.L. Sur.
Drlg. 1,011 ft.

Stanolind Oil & Gas Co.'s No. 3 J. M. Cowden, 440 ft. from S line and 440 ft. from W line, Sec. 34, Blk. 42, Twp. 1n.
S.D. 280 ft.

Sunray & Llano's No. 2 Jones, 2,310 ft. from N and E. Sec. 6, Blk. 44, Twp. 3s.
Drlg. 2,812 ft.

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. from N and 330 ft. from E, Sec. 22, C.C.S.D &R.G.N.G. Sur.
Show oil 520-25 ft.; T.D. 602 ft.; will probably shoot.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley
S.D. 1,415 ft

FISHER COUNTY

Merry Bros. and Perrini's No. 1 Howard, 1,320 ft. from N and 660 ft. from E, Sec. 180, Blk. 2, H.&T.C. Sur.
Drlg. 1,642 ft.

Roeser & Pendleton's No. 2 Hill, 2,310 ft. from N and 330 ft. from E, Sec. 208, B.B.B.&C. Sur.
Fishing 890 ft.

Southern Oil Co.'s No. 2 King, 230 ft. from S and W, Sec. 193, Blk. 1.
Rig.

GLASSCOCK COUNTY

Currie et al's No. 1 Currie, 330 ft. from S and W, Sec. 10, Blk. 35, Twp. 4s, T.&P. Sur.
Drlg. 300 ft.

John I. Moore et al's No. 1 J. S. McDowell 1,980 ft. from N line and 660 ft. from W line of Sec. 22, Blk. 34, Twp. 2s, T.&P Sur.
Drlg. 7,305 ft.

World Oil Co.'s No. 3-C McDowell, 2,310 ft. from N and W, Sec. 21, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 1,330 ft.

HOWARD COUNTY

F. H. E. Oil Co.'s No. 2 Dodge, 330 ft. from N and 990 ft. from E, Sec. 15, Blk. 30, Twp. 1s. T.&P. Sur.
Drlg. 2,362 ft.

Iron Mountain Oil Co.'s No. 1 Read, 330 ft. from E line, 330 ft. from S line, Sec. 46, Blk. 30, Twp. 1n. T.&P. Sur.
T.D. 2,760 ft.; set csg.; T.P. 2,438 ft.

Mixon et al's No. 1 Capps & Lucas, 2,310 ft. from S and 330 ft. from W, Sec. 17, Blk. 29, Twp. 1n, T.&P. Sur.
S.D. 2,615 ft.

Slagel's No. 1 Foster, 990 ft. from S and 330 ft. from W. Sec. 43, Blk. 29.
Cleaning out after plugging back.

IRION COUNTY

Johnson's No. 2 Tankersley, 500 ft. from N and 600 ft. from W, Sec. 22, H. Voelker Sur.
Drlg. 75 ft.

JEFF DAVIS COUNTY

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,322 ft. from E, Sec. 8 Blk. 3, H.&T.C. Sur.
Standard tools.

JONES COUNTY

Campbell et al's No. 1 Enevill, 1,400 ft. from N and 270 ft. from W, Sec. 2, M.E.&P. Sur., ½ mile S of Anson.
Drlg. 1,425 ft.

Byram et al's No. 1 McWright, 300 ft. from N and 660 ft. from W of SW Sec. 5, Blk. 15, Twp. 1s, T.&P. Sur.
Machine.

Capitan Oil Co.'s No. 1 Geiger, 220 ft. from S and E of 40-acre tract, S. Andrews Sur.
Drlg. 1,933 ft.

Condor Pet. Co.'s No. 2 Holt, 660 ft. from S and 330 ft. from E, Sec. 4, Blk. 20.
Drlg. 925 ft.

Hammer & Beam's No. 1 Sheppard, 1,308 ft. from N and 200 ft. from E of 160-acre tract, D. Minter Subdv. No. 53.
Drlg. 1,790 ft.

Dr. C. E. Johnson's No. 1 Young, 1,800 ft. from N and 750 ft. from W of SE 200 acres of B. Travenio Sur.
Location.

Nugent Oil Co.'s No. 1 Wilson, 3,000 ft. from N and 300 ft. from E, Sec. 1, Blk. 3, T.&N.O. Sur.
Drlg. 1,587 ft.

Ray & Staniforth's No. 1 Stewart, 600 ft. E of Texas Inland Oil Co.'s No. 1 Inland.
S.D. 1,930 ft.

Richards et al's No. 1 Ransom, 300 ft. from N and E, Sec. 244, B. M. Clopton Sur.
S.D. 750 ft.

Southern Oil Co.'s No. 2 Cade, 330 ft. S and 990 ft. E in Sec. 17, Blk. 19, T.P. Sur.
S.D. 2,400 ft.

LOVING COUNTY

California Co.'s No. 5-A Allen, 1,320 ft. from NE and 2,310 ft. from SE Sec. 90, Blk. 1.
Drlg. 822 ft.

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft from N and 1,650 ft. from W. Sec. 13 Blk. 57. Twp. 1. T.&P. Sur
S.D. 2,030 ft.; 1 bbl. sulphur water.

PECOS COUNTY

Gulf Prod. Co.'s No. 3 White & Baker, SE cor. of N half Sec. 4, Block 207, T.C. Ry Sur.
Underreaming csg. at 740 ft.

C. S. Messenger's No. 2 Rand Jones, 1,935 ft from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
T.D. 2,447 ft.; plugging back.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft from E line and 330 ft. from S line of Sec 17, Blk. 40, Twp. 9, T.&P. Sur.
S.D. 1,301 ft.

REAGAN COUNTY

Skelly Oil Co. et al's No. 1-D E. S. Grayson 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 8, University Land Sur.
Drlg. 8,498 ft.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
S.D. 2,455 ft.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 6, H.&G.N. Sur.
Cellar.

RUNNELS COUNTY

G. T. Hudson's No. 1 Lange, 1,701 ft. from S and 150 ft. from W of 962 acre in A. Williams Sur.
Location.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 2,475 ft. from W line of survey, Willett Holmes Sur. No 100.
Drlg. 1,737 ft.

S. Wells' No. 1 James, 396 from N and 330 ft. from E of James tract in Sec. 16, D Diaz Sur.
S.D. 620 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk L. G.H.&S.A. Sur.
S.D. 5,855 ft.; (S.L.M.).

Humble Oil & Ref. Co.'s No. 1 Ike Honig 2,640 ft. from N line and 2,650 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
S.D. 5,923 ft.

W. C. Proctor et al's No. 1 Judkins & Spencer, 1,320 ft. from S and W of W. W. Russell grant.
Rig.

SCURRY COUNTY

Coffield & Guthrie's No. 1 Holliday, 2,310 ft. from N and 330 ft. from W, Sec. 130, Blk. 97, H.&T.C. Sur.
Drlg. 1,445 ft.

STERLING COUNTY

Merry Bros. & Perrini's No. 1 Standsberry, 1,980 ft. from N and E Sec. 20, Blk. 30, W.&N.W. Sur.
Location.

STONEWALL COUNTY

Merry Bros. and Perrini et al's No. 1 Williams, C SW of SW, Sec. 6, Blk. C. A B &M. Sur.
T.D. 2,687 ft.; to rerun 6⅝-in. csg.

SUTTON COUNTY

Texas et al's No. 1 Mower, 1,980 ft. from S and W of Sec. 39, Blk. 5, T.W.&N.G. Sur.
Drlg. 622 ft.

TAYLOR COUNTY

Dunnigan Bros. et al's No. 2 Hunter, 850 ft. from S and 250 ft. from W of Subdiv. No. 14, Willis Sur.
Drlg. 2,640 ft.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
T.D. 5,635 ft.; C.O.

UPTON COUNTY

Gulf Prod. Co.'s No. 13 Crier-McElroy, 1,320 ft. from N and E Sec. 198, Blk. F.
Set csg. 2,541 ft.

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
S.D. 10,978 ft.

King Mountain Pet. Co.'s No. 1 Sherk, 330 ft. from S and W, Sec. 29, Blk. 1, M.K.&T. Sur.
Drlg. 130 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,980 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 2,040 ft.

WARD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Miller, 463 ft. from NW and 504 ft. from NE Sec. 3, J. C. Russell Sur.
Fishing 2,378 ft.

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 37 Blk. 34, H.&T.C. Sur.
S.D. 1,700 ft.

Bradford et al's No. 1 E. R. Allen, 660 ft from NW line and 651 ft. from NE line Sec. 11, H.&T.C. Sur.
Fishing 500 ft.

Cook Drlg. Co.'s No. 1 Wood, 330 ft. from NW and SW, Sec. 5, W. F. Stewart Sur. T.D. 2,548 ft.; plugged back to 2,527 ft.; cleaning out.

Plains Prod. Co.'s No. 1 J. J. McGregor, 660 ft. from SE line, 660 ft. from SW line Sec. 169, Blk. 34, H.&T.C. Sur.
T.D. 4,930 ft.

Postellio & Caprito's No. 1 Purcell, 330 ft from NE and 990 ft. from NW, Sec. 19 Blk. 34. H.&T.C. Sur.
S.D. 2,240 ft.

Rector Oil Co.'s No. 1 Monroe, 660 ft. from SE and NE, Sec. 2, Blk. 1, W.&N.W. Sur. Location.

Sageland Oil Corp.'s No. 2 Pure-Bennett 1,650 ft. from NW and 2,310 ft. from SW Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.

Tex-Mex Pet. Corp.'s No. 1 Pure-Bray, 1,980 ft. from NE and 660 ft. from NW, Sec. 6, Blk. 5, H.&T.C. Sur.
Drlg. 1,880 ft.

West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 14. Location.

WINKLER COUNTY

Gulf Prod. Co.'s No. 1 Wight, 330 ft. from S and E, Sec. 20, Blk. 40, P.S.L. Sur.
Material.

Harry Adams' No. 2 Scarborough, 990 ft from N line and 990 ft. from W line, Sec 2, Blk. 77, P.S.L. Sur.
Location.

Jeffries et al's No. 1 Brown & Altman 2,310 ft. from S and W, Sec. 6, Blk. B-3
Drlg. 2,475 ft.

Dr. Jeffries et al's No. 1 Underwood, 330 ft. from S and 2,310 ft. from E, Sec. 26, Blk. B-3.
Cleaning out 400 ft.

J. C. Maxwell's No. 1 Clapp, 2,310 ft. from N and 330 ft. from E, Sec. 27, Blk. 26, P.S.L. Sur.
Drlg. 2,470 ft.

Maxwell's No. 1 Daugherty.
Material.

Magnolia Pet. Co.'s No. 4 Walton, 330 ft from S and W, Sec. 1, Blk. 26.
Drlg. 2,583 ft.

R. S. Mathews et al's No. 1 Evans, 1,320 ft from N line and 1,320 ft. from W line Sec. 46, Blk. 73, P.S.L. Sur.
S.D. 110 ft.

Mid-Continent Pet. Corp.'s No. 1 Howe, 2,310 ft. from N and 330 ft. from W, Sec. 12, Blk. 26, P.S.L. Sur.
Drlg. 2,490 ft.

Richardson's No. 1 Walton, 1,010 ft. from S and 330 ft. from W, Sec. 1, Blk. B-3.
Rig.

Mid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 18, Blk B-11, P.S.L. Sur.
Drlg. 3,575 ft.

Sayre Oil Co.'s No. 1 Leck, 330 ft. from S and E, Sec. 2, Blk. 26, P.S.L. Sur.
Set csg. 1,225 ft.

Sayre Oil Co.'s No. 2 Howe, 330 ft. from N and W, Sec. 12, Blk. 26, P.C.L. Sur.
Location.

Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 25, Blk. B-11, P.S.L. Sur.
Elev. 2,726 ft.; drlg. 770 ft.

Sinclair Prairie Oil Co.'s No. 1 Cummings 2,310 ft. from N and 330 ft. from E, Sec. 11, Blk. 26, P.S.L. Sur.
Drlg. 2,610 ft.

Texas Panhandle Wildcats

Week Ending December 1

CARSON COUNTY

McGill's No. 1 Cooper, 330 ft. from S and W of N½ NE Sec. 4, Blk. 9, I.&G.N. Sur.
Top pay 3,030 ft.; T.D. 3,058 ft.; shot, and now C.O.

McClintock et al's No. 1 Jordan, 660 ft. N, 413 ft. W, Sec. 105, Blk. 4, I.&G.N.
Rig.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 37, H.&G.N. Sur., Blk. 9.
Fishing 5,225 ft.

COLLINGSWORTH COUNTY

Andrews & Kerr's No. 1 Gideon-Bell, C NW NE Sec. 6, Blk. 13, H.&G.N. Sur.
Drlg. 1,670 ft.

DALLAM COUNTY

Eben Warner's No. 1 Jarbie, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
S.D. 3,200 ft.; may abandon.

GRAY COUNTY

Irish-American Oil Co.'s No. 1-B Morse, 990 ft. S and 330 ft. E, W½ NE Sec. 54, Blk. 25, H.&G.N. Sur.
Rig.

Plains Holding Co.'s No. 1 Morse-Gulf, 330 ft. S and W, Sec. 57, Blk. 25, H.&G.N. Sur.
Cellar.

Stanolind O. & G. Co.'s No. 1 Cutter, 330 ft. N and E, W½ NE Sec. 173, Blk. 3, I.&G.N. Sur.
Location.

Texas Co.'s No. 1-C Taylor, 1,325 ft. from N and 1,320 ft. from W, Sec. 53, Blk. B-2, H.&G.N. Sur.
Drlg. 2,900 ft.; top pay 2,768 ft.

Texas Co.'s No. 1 Taylor, 990 ft. S and W of Sec. 81, Blk. B-2, H.&G.N. Sur.
Location.

HUTCHINSON COUNTY

Huey et al's No. 1 Christian, 220 ft. from S and 330 ft. from W, Sec. 32, Blk. Y, A.&B. Sur.
S.D. 3,060 ft.

Stekoil's No. 2 G. W. Whittenburg, 330 ft. S and W of H. Prewitt Sur.
Drlg. 210 ft.

Stanolind O. & G. Co.'s No. 1 Kinzer, 330 ft. S and E, Sec. 143, Blk. 3, T.&N.O. Sur.
Material.

MOORE COUNTY

Alma Oil Co.'s No. 1 Jones, 330 ft. N and

W, Sec. 171, Blk. 3-T, T.&N.O. Sur.
Standardizing 3,330 ft.
Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.
T.D. 5,012 ft.; to P.B. for a gas well.
Texoma Nat. Gas Co.'s No. 1 Haas, 2,672 ft. N, 1,791 ft. E, Sec. 20, Blk. P.M.C., E.I.R.R. Sur.
Drlg. 1,133 ft.
Texoma Nat. Gas Co.'s No. 3-P Sneed, 3,734 ft. N and E of M. George Sur.
Drlg. 1,052 ft.

POTTER COUNTY

U. S. Bureau of Mines, No. 2-A Bivins, C NE Sec. 22, Blk. 6, B.S.&F.
Drlg. 2,200 ft.

RANDALL COUNTY

English et al's No. 1 Oxnard.
T.D. 5,370 ft.; to set csg.

WHEELER COUNTY

Bowers & Carvers' No. 1 L. B. Sims, 330 ft. from N line, 330 ft. from E line of SW Sec. 60, Blk. 17, H.&G.N. Sur.
Drlg. 3,166 ft.
Carver Drilling Co.'s No. 1 Rock Island, 1,600 ft. from S line, 2,310 ft. from W line, Sec. 47, Blk. 13, H.&T.C. Sur.
S.D. 470 ft.
Christie-Hickman's No. 1 Walker, 330 ft. S and E of NE Sec. 49, Blk. 24, H.&G.N. Sur.
Drlg. 2,415 ft.
Cloud et al's No. 1 Farren, 330 ft. N and W, NE SE Sec. 34, Blk. 24, H.&G.N.
Drlg. 420 ft.
Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, H.&G.N. Sur.
Drlg. 2,112 ft.
Ben G. Barnett's No. 1 Boren, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
S.D. 1,210 ft.
Johnson et al's No. 1 Grogan, 438 ft. N and 150 ft. W, Sec. 57, Blk. 23, H.&G.N. Sur.
Drlg. 280 ft.
LeFors Pet. Corp.'s No. 1 Perkins, 330 ft from S line, 330 ft. from W line, Sec. 54 Blk. 24, H.&G.N. Sur.
Rig.
Martin & Son's No. 1 Plummer, 330 ft. N and E, NW SW Sec. 45, Blk. 45, H.&G.N.
Drlg. 200 ft.
Mudge Oil Co.'s No. 1 Dougherty, C SW Sec. 98, Blk. 23, H.&G.N. Sur.
S.D. 1,850 ft.
Reno Oil Co.'s No. 1 Mankins, SW SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
T.D. 2,216 ft.; no pipe line connection.
Smith Bros.' No. 1 Williams, 330 ft. N and E, W½ SE Sec. 49, Blk. 24, H.&G.N Sur
T.D. 2,551 ft.; T.P. 2,496 ft.; S.D. for storage.
Underwood et al's No. 1 Roach, 330 ft. N and E. Sec. 27, Blk. 24, H.&G.N. Sur.
Drlg. 315 ft.

East Central Texas Wildcats

(Continued from Page 50)

HUNT COUNTY

Cauble & Thompson's No. 1 Reed, 330 ft. N of northerly NE cor. of C. B. Payne Sur., but in F. Thweatt Sur., 3 miles SE of Greenville.
Derrick.
G. S. & S. Co.'s No. 1 O. Popper.
S.D. 2,885 ft.
J. C. Hall's No. 1 Parrish, C of 100-ac. tract, N. Delaney Sur., 5 miles N of Lone Oak.
Derrick.
Harrison-Abercrombie's No. 1 Morrison, 1,757 ft. from E and 470 ft. from S lines, A. Lawson Sur., 5 miles SW of Greenville.
Top Austin 1,269 ft.; drlg. 1,780 ft.
L. G. Priest's No. 1 Amelia Barnett, 1,075 ft. from W line, 320 ft. from S line of J. C. Hamer Sur.
S.D. 3,183 ft.
Winn's No. 1 J. R. Phillips, 320 ft. from S line and 960 ft. from W line of tract and survey, W. J. James Sur.
S.D. 40 ft.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
S.D. 900 ft.
L. P. Kean's No. 1 J. B. Hunter, R. Sowell Sur., 300 ft. from SW and 150 ft. from SE of 50-ac. tract, 4 miles S of Terrell.
Top Austin 1,785 ft.; S.D. 1,810 ft.

LEON COUNTY

Normangee Corp.'s No. 1 B. H. Henry, 1,350 ft. from E line and 2,700 ft. from N line of survey, Robert Rogers League, 2¼ miles NE of Normangee.
Drlg. 2,825 ft.

LIMESTONE COUNTY

Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
Rigged up.
Schultz' No. 1 Roy Ward, NE cor. of 73.2-ac tract, 5 miles W of Mexia Field, Harrison York Sur.
Derrick.
Stewart Bros. and Watson's No. 1 T. N. Wilson, 1,400 ft. W and 330 ft. N of 236.1-ac. tract in Alex W. Patton Sur., 1½ mi. SE of Prairie Hill.
Drlg. 525 ft.
V. V. Waite's No. 1 Barrow, 650 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 2½ miles NW of Thornton.
Pits.

MORRIS COUNTY

Fleetborn Oil Corp.'s No. 1 Hammond, 2,500 ft. S and 1,750 ft. W of Thos. Burford Sur., 8 miles SE of Omaha.
Base Austin 3,180 ft.; drlg. 3,725 ft.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Cars. H Y Bailey Sur
Fishing 3,925 ft.
Wells et al's No. 1 Z. Ramblin, 900 ft. N and 330 ft. W of SE cor. of tract and survey, J. Simpson Sur., 12 miles NE of Nacogdoches.
Rigged up.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,186 ft.
R. B. Cocding et al's No. 1 Lula Kelt, 450 ft. from S line and center of N and E lines of lease, 3 miles NE of Chatfield C. B. Emmons Sur.
S.D. 1,340 ft.
W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
T.D. 2,880 ft.
McCullough et al's No. 1 C. Berry, 330 ft from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.

RAINS COUNTY

Wadley et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
S.D. 4,632 ft.

RED RIVER COUNTY

Dinger's No. 1 W. T. Norris, 1,000 ft. from S and 1,900 ft. from W of 400-ac. tract, Jos. Guest Sur., 1 mile S of Detroit.
Location.

RUSK COUNTY

Fair, et al's No. 1 J. W. Needham, 335 ft from W line and 700 ft. from N line of tract and survey, 10 mi. S of Henderson on 135-ac. tract, J. W. Chambers Sur
Base Austin 4,053 ft. and top Woodbine; coring 4,090 ft.
Abercrombie-Harrison's No. 1 Bowen & Grant, 1,030 ft. W and 400 ft. S of 528-ac. tract, Midkiff Sur., 6½ miles NW of Clarksville.
Location.
Headwater Oil Co.'s No. 1 F. L. Gary, 374 ft. N of S line and center of E and W lines of 200-ac. tract, 3 miles E and S of Henderson, Jose A. Mora Sur.
Drlg. 3,200 ft.
George Hudson et al's No. 3 Jeff Phillips, 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur.
S.D. 3,673 ft.
Ben Lamb's No. 1 H. Leath, 330 ft. out of NW cor. of 185-acre tract in L. J. Dooley
S.D. 2,510 ft.

SMITH COUNTY

Deck et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur. 3 miles E of Van Field.
Spudded and S.D.
Fair et al's No. 1 Rushing, 1,000 ft. SE of old hole, 1½ miles SE of Whitehouse.
Top Woodbine 4,296 ft.; S.D. 4,673 ft.
Paul S. Williams et al's No. 1 Dean, 330 ft. E and 730 ft. N of 100-acre tract in Denson Moore Sur., 1 miles NE of Bullard.
Elev. 485 ft.; S.D. 70 ft.

UPSHUR COUNTY

Wadley et al's No. 2 Shuttlesworth, 45 ft. from SE of No. 1 dry hole or 285 ft. from S and E lines, J. Dunn Sur.
Coring 3,732 ft.

VAN ZANDT COUNTY

Pet. P. L. & Storage Co.'s No. 4 Mrs. S. McGee, 450 ft. S of N line and 155 ft. E of W line of 53.4-ac. tract, Blk. 20, Elevation 441 ft.
S.D. 815 ft.
Pete Corley et al's No. 1 Slaton, 160 ft. from W and 660 ft. from N lines of William Carlton Sur., 3 miles SE of Ben Wheeler.
Set csg. 70 ft.
Florence Oil Co.'s No. 2 Sanger, 316 ft. W of SE cor. and 151 ft. S of S line of Pure-Blackstock lease, John Walling Sur
Rig.
Gillum and Allen et al's No. 1 A. T. Bass 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
S.D. 1,700 ft.
Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin.
Location.
Rogers & Schwartz's No. 1 McKinsey, C of N and S lines and 150 ft. from W of 106-ac. tract, Wm. Daniels Sur.
S.D. 1,257 ft.
Martin & Evans' No. 1 Bryant, 483 ft. N of same operators' dry hole, Nacogdoches County School Land Sur.
Rigged up.
Miller et al's No. 1 J. M. Palmer, 150 ft from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
S.D. 920 ft.
Overton Ref. Co.'s No. 4 Carter, 300 ft. N of No. 2 Carter, 1,327 ft. S and 142 ft. W of Carter 171-ac. tract.
Drlg. 2,302 ft.
Peden and Olson's No. 1 J. M. Palmer, 200 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,288 ft.
M. Rouch et al's No. 1 Bearden & Palmer 150 ft. out of SE cor. of 61-ac. tract Nacogdoches C.S.L.
Fishing 1,237 ft.

Southwest Texas Wildcats

(Continued from Page 48)

DUVAL COUNTY

Conway & Buescher's No. 1 Hoffman, 330 ft. NE and SE lines of Sur. 119.
Drlg. 62 ft.
Grimes et al's No. 1 Fitzsimmons, 300 ft. S line and 150 ft. E line, Sur. 291.
Standing 115 ft.
W. C. McBride's No. 1-A Hagist, 330 ft. from N and E lines of Blk. 2, Sec. 365.
Standing 1,063 ft.
Mills Bennett Prod. Co.'s No. 1 D.C.R.C., 150 ft. N, 4,200 ft. E line of Sur. 193.
Drlg. 2,820 ft.
Stieren Oil Co.'s No. 1 J. P. Philp, 1,650 ft. S line, 990 ft. E line, Sur. 320.
Drlg. 2,685 ft.
Texas Co.'s No. 2 Graham, 990 ft. SE line, 1,650 ft. SW line of Sur. 571.
Spudded.

EDWARDS COUNTY

Carter et al's No. 1 W. A. Miers, 990 ft. from N and E lines of Sec. 6, C.C.S.D.& R.G.N.G. Sur.
T.D. 535 ft.; abd.
Will Olhausen's No. 1-B Turney, 660 ft. from W line, 1,622 ft. from N line of Sec. 176, C.C.S.D.&R.G.N.G. Sur.
Fishing 880 ft.
H. H. Sides' No. 1 Turney, C.C.S.D.&R.G.N. G. Sur. No. 164, 1,320 ft. N line and W line of survey.
Standing 1,010 ft.
Harry Adams' No. 1 Holman, 1,650 ft. N line, 330 ft. from E line, Sec. 22, C.C.S.D. &R.G.N.G. Sur.
Standing 590 ft.; showing oil.

FAYETTE COUNTY

Clark et al's No. 1 Becker, in townsite of Roundtop.
Location.
Ross Fenton's No. 1 Kasper (263-ac.), 2,000 ft. NW and SW lines of Thos. Green Sur.
Location.

FRIO COUNTY

Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin at most easterly N cor. of John E. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 800 ft. (4 mi. SW of Pearsall).
T.D. 10,050 ft.; may abd. or P.B. to showing at 3,900 ft.

GILLESPIE COUNTY

Ed L. Nixon's No. 3 Lindig, 12,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur No. 41, or 6 ft. S of No. 1.
Fishing 650 ft.

GOLIAD COUNTY

Magnolia Pet. Co.'s No. 1 Albrecht, 660 ft. N line, 330 ft. SW line of J. P. Reid Sur.
Spudded.
Oceanic Pet. Co.'s No. 1 Fromme, 1,500 ft S line, 1,200 ft. W line of 62-ac. tract in P. D. Dexter Sur., 10 miles N of Goliad.
T.D. 2,685 ft.; abd.

GUADALUPE COUNTY

J. W. Burrows' No. 1 Beuhring, 1,000 ft. S line, 750 ft. W line of Jos. Clements Sur., SW Darst Creek Field.
Location.
L. E. Trout's No. 1 McKee, Green DeWitt Sur., SW Darst Creek.
Abd. 1,200 ft.
H. H. Weinert et al's No. 1 Sylle Schmidt, Wakefield Sur., E of Kingsbury Field.
Location.

HIDALGO COUNTY

Clay, Spencer & Hood's No. 1 Brooks & Showers, 330 ft. N and E lines of Lot 4, Blk. 12, Por. 79-80.
Derrick.
Danvers-Harrison et al's No. 1 Guerra, 330 ft. out of SW cor. of 40-ac. tract, Blk. 13, Porcion 41.
Drlg. plugs 2,755 ft.
Davis & Harrison's No. 1 Lula George, 303 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa.
T.D. 4,135 ft.; set perforated liner in effort to get gas or oil in sand at 4,109-35 ft.
John Deering et al's No. 1 John C. Engleman, 400 ft. S and W lines, Lot 3, Blk. 79, Mestenas tract.
S.D. 6,009 ft.
Downey & Morton's No. 1 Doskam, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
T.D. 2,000 ft.; S.D. for new boilers.
Gato Oil Co.'s No. 1 Brocks & Showers, 500 ft. N line, 400 ft. W line of Tract 8, Blk. 26, Por. 79.
Spudded.
Jenkins & Secton's No. 1 John D. Puckett, 330 ft. N and W lines, Share 96, San Salvador del Tule grant.
Derrick.
Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 86, North Capisallo district.
Drlg. 7,600 ft.

JIM HOGG COUNTY

John D. Norwood's No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48.
T.D. 1,370 ft.; S.D. for orders.
J. M. Shugart's No. 1 R. Holbien, 100 ft. from N line, 330 ft. from S line of Blk. 55, Sur. 17 of Holbien Subd., of Las Animas grant.
Drlg. 650 ft.
Sun Oil Co.'s No. 1 A. L. East, 660 ft. from N and E lines of Blk. 4, Sur. 33, Cmtd. csg. 200 ft.; W.O.C.
Texas Co.'s No. 1 Guiterres, 2,310 ft. S line, 330 ft. E line of Sur. 165.
Location.

JIM WELLS COUNTY

Smith & Storey's No. 1 Martha E. Ellworth, 330 ft. N and W from SE cor. of W half of W 426 acres of Stanley Welch Sur.
Standing 6,115 ft.; to P.B. and test sands.

KARNES COUNTY

R. E. Cezeaux et al's No. 1 Tom Campbell, 330 ft. S and E cor. of farm and survey, J. R. Backer Sur., 12½ miles SW of Falls City.
Abd. 1,254 ft.
E. E. Green's No. 1 Miss Olive Henke, 2,970 ft. N along W line from SW cor., 990 ft. at R/A from 300-ac. tract, Seguin grant.
Location.
Pacific Gas & Fuel Co.'s No. 2 Choate, near No. 1.
Location.

KENDALL COUNTY

Walter Bradley's No. 1 Warner, John F. Torrey Sur.
Abd. 919 ft.
W. R. Shanklin's No. 1 Seidenstick, 1,835 ft. from most easterly E line, 100 ft. from most northerly S line of Antonio Rodegues Chacon Sur. 257.
Abd. 400 ft.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur.
S.D. 675 ft.
Herbert Oil Co.'s No. 1 J. D. Witt, 12,200 ft. from N line, 1,200 ft. from W line of Sec. 1,923, Hamilton Sur.
Abd. 1,896 ft.
Jeff Love and Eastland Oil Co.'s No. 5-B Jeff Love, 1,500 ft. SE of No. 1 and 1,580 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
T.D. 3,465 ft.; waiting on orders.
J. F. Morrissey et al's No. 1 F. A. Karge, 1,400 ft. from S line and 600 ft. from E line of survey, Sec. 1, B.S.&F. Sur.
Drlg. 1,750 ft.

LA SALLE COUNTY

Standard Oil Co. of D. C.'s No. 1 J. M. Martin, 300 ft. S and W lines of 642-ac. farm in Sur. 683.
Drlg. 2,255 ft.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, 1,860 ft. from N line, 150 ft. from E line of tract, David Hudson Sur.
Milling out csg.

LIVE OAK COUNTY

Baugh & McMillan's No. 1 Walton & Campbell, D. R. Fant Sur.
Drlg. below surface csg.
Guss Brunson's No. 1 fee, Ayers Sur.
Location.
W. H. Helmerich's No. 1 Cartwright, 660 ft. from W line, 330 ft. from S line of Lot 16, Seale, Morris & Seale Sur.
Coring 5,105 ft.
Henderson Coquat et al's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur. and 320 ft. N of S line.
S.D. for repairs 3,404 ft.

MAVERICK COUNTY

Mike Chorgas et al's No. 1 Mathews, on edge of municipal airport at Eagle Pass.
Drlg. 410 ft.

McMULLEN COUNTY

Beer & Witherspoon's No. 2 Ezzell, 1,000 ft. W of No. 1, Adams Sur.
Set csg. in sand 760-83 ft.
H. K. Boysen's No. 1 Hagist, 990 ft. S, 330 ft. W of NE cor. Sec. 10, H.&T.C.R.Y. Sur.
Drlg. 1,650 ft.
Byron Rife's No. 1 Edrington, 330 ft. from S and W lines of Sec. 79.
Drlg. 2,250 ft.
Circle W Oil Co.'s No. 1 Wheeler, NW cor. Sec. 44, of Two Rivers Ranch Subd.
Abd. 1,812 ft.
Choate & Noble's No. 1 Miles, 330 ft. from S line, 2,750 ft. from E line of 1,250-ac. tract in Stephens Sur.
Location abd.

MEDINA COUNTY

C. M. Peacock's No. 1 Odem, 160 ft. from W line, 200 ft. from S line of Castro Sur. No. 173-174.
Location abd.
Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 396.
Standing 1,825 ft.

MILAM COUNTY

Barron & McGee's No. 1 R. Lundgren, 1,100 ft. NE line, 600 ft. NW line of 125-ac. tract in L. Kimbro Sur.
Location.
C. F. Drake et al's No. 1 Standard Coal Co., 970 ft. SW line, 1,700 ft. SE line of G. L. Johnson Sur.
Drlg. 2,025 ft.
Frank W. Keller, Inc.'s No. 1 A. L. Lucas, 1,980 ft. from N line, 400 ft. from E line of 178.5-ac. tract in J. Real Sur.
Location.
Second Natl. Bank's No. 1 B. P. Ward, 150 ft. SW line, 950 ft. SE line of 100-ac. tract, L. Taylor Sur.
S.D. 2,355 ft.

NUECES COUNTY

Clymore Oil Co.'s No. 1 Palo Alto Farms, 2,640 ft. from N and E lines of Sec. 132 of Bishop Subd.
Abandoned.

REAL COUNTY

M. J. Heartwell et al's No. 2 L. J. Haby, 694 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175.
T.D. 2,837 ft.; W.O.C.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 466 ft. E, 220 ft. N of SW cor. of the North B. Giddings Sur. on a 1,000-ac. tract.
Sandy shale 2,462 ft.; moving in heavier rig; S.D.
Carpenter et al's No. 1 Sadler, Mud Flats area.
Standing 6,009 ft.
Lonnie Glasscock's No. 1 M. F. Timmons, 330 ft. out of SE cor. of Blk. 27, San Patricio townsite.
Drlg. 5,300 ft.; to make a D.S. test at 4,700 ft.; no report.

STARR COUNTY

Armstrong, Emanuel & Adams' No. 1 S.C. C.C., 330 ft. from S and E lines of Blk. 57, Porcion 88-89.
Spudded.
Jules Alford's No. 1 A. Flores, 330 ft. from N and W lines of 10-ac. of E 20-ac. of NW 30-ac. of Tract 250, Por. 38, 5,500 ft. NW discovery well in Hidalgo County.
Coring 2,750 ft.
Conway & Emanuels' No. 1 S.C.C.C., 360 ft. W line, 330 ft. S line, Blk. 62, Jeffries Lambeth Div., Porcion 88-89.
Moving in material.
Conroe Drlg. Co.'s No. 1 Guerra, 330 ft. SE and NE line, Blk. 95, Por. 55.
Rigging up.

C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 6 (NE part of county).
Standing 2,687 ft.
Crawford et al's No. 1 Hicks et al, 150 ft. SE and NE line of NW, Perdernal grant.
Drlg. 410 ft.
Lester & Duffield's No. 1 Carruth, 3,690 ft. S line, 3,300 ft. W line of Share B-1, Porcion 91-92.
Derrick.
Merren, Johnson & Jeffries' No. 1 S.C.C.C., 660 ft. from N and W lines of Blk. 37, Por. 88-89.
W.O.C. 2,531 ft.
C. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281.
Drlg. 3,510 ft.
Heep Oil Co.'s No. 1 Guerra, 330 ft. from NE and SE lines of Blk. 35, J. N. Crawford Subd., Porcion 56, Jurisdiction of Mier.
Ready to spud.
Smith & Weston's No. 1 M. M. Garcia, Blk. 9, Sur. 908.
Spudded.
Sun Oil Co.'s No. 1 Gonsales & Clark, 600 ft. out of NW cor. of NE Sec. 373, T.T. Ry. Sur. No. A-773.
Coring 3,995 ft.
United Prod. Co.'s No. 1 Guerra, 36, 170 ft. from NE line, 1,521 ft. from NW line of Porcion 66.
T.D. 3,030 ft.; repairing wtr. pump.
E. L. Younkin's No. 1 Kelsey Bass, 330 ft. from S line, 7 ft. from W line of Blk. 19, in Porcion 87.
Standing 2,572 ft.

TRAVIS COUNTY

Marts & Beavens' No. 1 Emil Bloomquist, 150 ft. from NW line and SW line of 99¼-ac. tract in Peter C. Harrison Sur. Abd. 1,300 ft.
Mimms, New & Anderson's No. 1 Bohm, 1,250 ft. SW along NW line of Bohm tract from N cor. and 150 ft. NW in S. Del Valle Sur.
Standing 515 ft.
Title et al's No. 1 Johnson, 330 ft. each way from cor. of 50-ac. tract in Kimbro area.
Drlg. 465 ft.

UVALDE COUNTY

Humble Oil & Ref. Co.'s No. 1 R. L. Anderson, 7,450 ft. SW of NE line and 9,100 ft. SE of NW line of J. J. Guerra Sur. (3 mi. NE of Uvalde).
Abd. 5,015 ft.
T. T. Word's No. 1-B Truelove, 45 ft. E of No. 1-A.
Standing 2,180 ft.

WEBB COUNTY

Detterhaim & Jones' No. 1 M. Jones, 600 ft. E line, 1,620 ft. S line of Sur. 1,640.
Standing 455 ft.
Payne et al's No. 1 Hoggterp, Blk. 6, Sur. 1,110, W of Oilton.
Location.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 16, Blk. 30, Santa Rosa Subd., Share 44.
Drlg. 2,000 ft.; no report.

WILLIAMSON COUNTY

Johnson & Ray's No. 1-A Mary Smith Oxford, 350 ft. S, 40 deg. E of No. 1, Williams Sur.
S.D. 715 ft.
Mann & Roos et al's No. 1 F. Roos, John Bevil Sur. 56.
T.D. 1,025 ft.; C.O. caving hole.
T. J. McConnell's No. 1 J. R. Nasier, 150 ft. from S line and San Gabriel River and 150 ft. from E line of 124-ac. tract in Zarso Sur.
Standing 948 ft.
J. Morgan Russell's No. 2 Nelson, 3,200 ft. from CEL of W. Donaho Sur. No. 117, 1,600 ft. from CSL.
Drlg. 375 ft.
Stalley & Caffy's No. 1 A. J. Nelson, 350 ft. from SE line and 150 ft. from NE line of Barney C. Love Sur.
T.D. 355 ft.; H.F.W.; standing.

WILSON COUNTY

Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.5-ac. tract in Concepcion Bostello Sur. No. 9.
Rigged up and S.D.
J. C. Yancey's No. 1 Lyssy, 300 ft. from SE and SW lines of lease in D. J. Holt Sur.
T.D. 1,600 ft.; S.D. in shale.

ZAPATA COUNTY

Danvers & Harrison's No. 1 M. J. Vela, 630 ft. NE line and 300 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 29, Blk. 7, Bela Subd.
T.D. 1,603 ft.; reaming at 1,105 ft.
Merle Gunby's No. 3 Alice D. Haynes, 200 ft. SE and NE lines, Blk. 9, Haynes Subd., Comitas and Villa grant.
Abd. 3,502 ft.
Merle Gunby's No. 4 Alice D. Haynes, 760 ft. from SE line, 200 ft. from SW line of Blk. 4, Haynes Subd. of Comitas & Villa grant.
Location.
Joe Palmer's No. 1 J. M. G. Martinez, 150 ft. SE and SW line, Blk. 27, Sur. 434.
Drlg. 165 ft.
A. H. Wray's No. 5 Gopher Trust, 330 ft. NE and NW lines of Blk. 12, Sur. 1, San Ignacia Subd., Borrego grant.
Drlg. 765 ft.

Southwest Texas Proven

Week Ending December 1

NORTH DALE POOL—BASTROP COUNTY

Cole Pet. Co.'s No. 1 Rubin Gage, NE cor. of tract, 150 ft. each way from corner.
Location.
Joe E. Mills' No. 1 Mrs. W. J. Cardwell, 900 ft. from SE line, 1,200 ft. from SW line of tract, J. A. Navarro Sur.
Rigging up and S.D.
Porter and Neal's No. 1 J. F. Wolff, 150 ft. from NE line, 2,800 ft. from SE line of F. Edmundston Sur.
Spudded and S.D.

CAESER—BEE COUNTY

Falvey et al's No. 1 J. J. Grissom, 150 ft. N and W lines of 771.9-ac. of McEarly Sur.
Location.
Luling O. & G. Co.'s No. 5 (B-3) Ruhmann, 300 ft. S, 300 ft. E of No. 4 (C-1).
T.D. 3,077 ft.; jetting 50 bbls. per day; still cleaning.
Luling O. & G. Co.'s No. 6 (B-4) Ruhmann, 150 ft. N line, 300 ft. W line of Blk. 29.
Location.

NORTH PETTUS FIELD—BEE, GOLIAD AND KARNES COUNTIES

United Prod. Co.'s No. 47 Ray, 300 ft. NW from SW cor. of Houston Oil Co.'s Neihaus "B" lease along Neihaus-Ray property line, thence 330 ft. in SW direction at R/A to previous course.
T.D. 3,958 ft.; cmtd. csg.; prep. to test.

TULETA—BEE COUNTY

Blanco Oil and Buchanan's No. 2 Pevey, 300 ft. from S and E lines of their 100-ac. "A" lease.
Moving on.
Heyser, Heard & Jones' No. 3 (B-2) Rapp
Location.
Heyser, Heard & Walton's No. 1 Perez, C of Blk. 9, of SE Sec. 8.
T.D. 3,955 ft.; reaming to make D.S. test.
Edwin M. Jones' No. 2 Skinner & Harris
Coring sand 3,900 ft.
Edwin M. Jones' No. 2 Robinson, 330 ft. from S line, 990 ft. from E line of SW of Sec. 5.
Location.
Houston Oil Co.'s No. 1 Ed Strauss, C of Blk. 2, SW Sec. 9, Uranga grant.
Ready to spud.
Mills Bennett's No. 2 Harris, 990 ft. from E line, 330 ft. from S line of tract.
Drlg. 2,000 ft.
Mills Bennett's No. 1 Silcock, 330 ft. S and W of NE cor. Sec. 9, Uranga grant.
T.D. 4,226 ft.; P.B. and perforated csg. 3,-898-3,901 ft.
Mills Bennett's No. 1 Tuleta Mercantile Co., 330 ft. from N and W lines of SW Sec. 10.
Derrick.
Whisenant & Trenchard's No. 1-B Rapp.
Blew out at 3,200 ft., but now under control.

HOCH—BEXAR COUNTY

H. J. Trawalter's No. 7 fee, 150 ft. from N line, 450 ft. from E line of 203-ac. tract in S. Jett Sur. No. 53.
Standing 450 ft.

DALE—CALDWELL COUNTY

W. B. Hinton's No. 1 Osteen, 150 ft. SW line, 450 ft. NE line of 70-ac. tract in Swearingen Sur.
T.D. 2,010 ft.; showing oil.
McNeil Pet. Co.'s No. 1 J. M. Miears, 660 ft. NW line, 700 ft. SW line of 327-ac. tract in W. C. Swearingen Sur.
Drlg. 600 ft.

DUNLAP—CALDWELL COUNTY

Moseley's No. 1 J. M. Pierce, 150 ft. E line, 400 ft. S line of G. C. and W. P. Walker tract, Seale Sur. No. 8.
Drlg. 1,790 ft.; no report.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Brown & Nessly's No. 1 Curry, 330 ft. N line, 900 ft. W line of SW, Sur. 62.
Location.
Brown & Nessly's No. 2 Runnels, 330 ft. S line, 990 ft. W line of NE NW Sur. 62.
Location (reported drilling in error).
Edna Bryant et al's No. 1 J. W. Kidd, 430 ft. S line, 315 ft. E line of Sur. 56.
Abd. 2,020 ft.
Edgington & Murray's No. 1 C. W. Hahl, 330 ft. N and E lines, Blk. 16, Sur. 250.
Skidding rig.
Feliz Oil Co.'s No. 2 Curry, 330 ft. S line, 990 ft. W line of N½ SW of Sur. 62.
W.O.C. 2,360 ft.
Gov. Wells Oil Co.'s No. 7 State, 990 ft. N line, 2,310 ft. W line of Sur. 60.
T.D. 2,350 ft.; I.P. 20 bbls. per hr.
Gov. Wells Oil Co.'s No. 8 State, 330 ft. W line, 900 ft. N line of NE of Sur. 62.
Spudded.
Magnolia Pet. Co.'s No. 7 B.D.L.C., 330 ft. S and W lines of Sur. 135.
Location.
Magnolia Pet. Co.'s No. 1 D.C.R.C., 330 ft. S and E lines of Sur. 57.
Drlg. 2,013 ft.
Magnolia Pet. Co.'s No. 41 D.C.R.C., 330 ft. from S and W lines of NW of Sur. 309.
Testing 2,310 ft.
Magnolia Pet. Co.'s No. 9 Hahl-Sutherland, 990 ft. N line, 1,650 ft. W line of Sur. 61.
Drlg. 2,210 ft.
Magnolia Pet. Co.'s No. 1 Emil Labbe, 330 ft. S and W lines of Sur. 2.
T.D. 2,460 ft.; comp.; dry gasser; 900 lbs. csg. pressure.
Magnolia Pet. Co.'s No. 10 J. O. Wilson, 330 ft. N and E lines of Sur. 343.
Drlg. 2,015 ft.
Newton & Andrews' No. 1 Bowe, 330 ft. S and W lines of Blk. 21, Sur. 250.
Drlg. 1,210 ft.
Russ Pet. Co.'s No. 3-C Hahl, 330 ft. from N and E lines of NW of Sur. 62.
Location.
Smith & Story's No. 12 Luncell, 330 ft. S line, 990 ft. W line of Sur. 48.
Rigging up.
Texas Co.'s No. 6 B.D.L.C., 1,025 ft. W line, 360 ft. S line of Sur. 135.
W.O.C. 2,370 ft.
E. R. Thoas' No. 1 Bishop Cattle Co., 2,-325 ft. E line, 330 ft. N line of S½ of Sur. 135.
Location.
Trapshooter Reilly's No. 6 Hahl, 885 ft. N line, 330 ft. E line of Blk. 27, Sur. 250.
W.O.C. 2,256 ft.
J. H. Winch's No. 1 Smith Corkill, 1,667 ft. NW line, 980 ft. SW line of Sur. 491.
Drlg. 1,355 ft.

HOFFMAN—DUVAL COUNTY

Southwest Drlg. Co.'s No. 1 Cuellar, 330 ft. SW and NW line of NE of Sur. 114.
Set 10-in. csg. 40 ft.; W.O.C.

DARST CREEK—GUADALUPE COUNTY

Grayburg Oil Co.'s No. 1 Appling, 150 ft. W of E cor. of 15-ac. tract in J. Hodges Sur.
Skidding in derrick.

LUCAS—LIVE OAK COUNTY

Lion Oil & Ref. Co.'s No. 2 McNeil, J. Curry Sur., 660 ft. N of No. 1.
Drilled plugs at 5,860 ft.; reaming tubing 5,920 ft.
Houston Oil Co.'s No. 29 Cartwright
Coring shale 5,444 ft.

SAM FORDYCE—HIDALGO COUNTY

W. E. Butler's No. 1 F. B. Guerra, 93 ft. N line, 294 ft. S and W lines of 2.5-ac. tract in Tract 254, Por. 39-40.
Location.
Circle W Oil Co.'s (Navarro) No. 1 Seabury, George & Taylor, 330 ft. S and E lines of SE 51-ac. tract in Tract 256, Por. 38.
Sand 3,735-39 ft.; spraying oil on 3/16-in. choke; 1,150 lbs. closed-in pressure.
Jack Clements' No. 1 Felipe Farias, 150 ft. from N and E lines of Share 273, Por. 39.
Reynosa.
Derrick.
Cosmo Pet. Co.'s No. 1 F. B. Guerra, 390 ft. W line, 130 ft. N and S lines of N 25-ac. of S 100-ac. of E 290-ac. of Tract 254, Por. 39-40.
Rigging up.
Danvers-Harrison & Davis' No. 1 Dr. Austin, center of E 7.2-ac. of S 14.4-ac. in Share 282, Por. 39.
Location.
Davis & Harrison's No. 1 Smith, S offset to No. 1 Guerra, of D. & H.
Location.
M. Porter Evans' No. 1 John W. Lawrence, 330 ft. from N and W lines of W 19.04-ac., Share 274, Por. 39.
Drlg. 2,100 ft.
Porter Evans' No. 1 David Flores, Tract 262, Por. 38.
S.D. 2,230 ft.
Heep Oil Co.'s No. 2 Seabury et al, 330 ft. N and E lines of SE 240 acres, Tract 256, Por. 38.
Set csg. in oil sand 2,775-80 ft.
Henshaw Oil Corp.'s No. 1 Seabury et al, C of SW 11.5 acres of NE 45.25 acres, Tract 256, Por. 38
Location.
R. C. Horne's No. 1 F. B. Guerra, 93 ft. S line, 294 ft. E and W lines of NW 2.5-ac. tract in S 125 acres of E 290 acres of Tract 254, Por. 39-40.
Location.
T. I. Larson's No. 1 G. G. Salinas, 330 ft. S and W lines of Share 10, Por. 41.
Drlg. 2,700 ft.
Moncrief & Showers' No. 2 John Lawrence, 305 ft. N line, 241 ft. E line of 13.5-ac., Tract 274, Porcion 39.
Moving in derrick.
Moncrief & Showers' No. 1-B J. Lawrence, NE 13.5 acres, Tract 274, Por. 39.
Set csg. in oil sand 2,800-04 ft.
Moncreif & Showers' No. 1 C. E. Smith, Tract 3-B, Por. 41.
Moving in machinery.
Moss & Bass et al's No. 1 F. B. Guerra, 245 ft. N line, 300 ft. W line of 25 acres of S 50 acres of E 290 acres, Tract 254, Por. 40.
Location.
Newman et al's (Imperator Oil Co.) No. 1 A. Flores, 3,400 ft. E of discovery well.
Drlg. 1,650 ft.
Phillips Pet. Co.'s No. 1 Seabury et al, Tract 278, Por. 40.
Spudded and S.D.
Reynosa Oil Co.'s No. 1 Guerra, 330 ft. from W line, midway between N and S lines of NW 10-ac. of SW 40 acres of Tract 254, Porcion 39.
Machinery on ground.
Reynosa Oil Co.'s No. 1 P. S. Rivas, 330 ft. from N line, 258 ft. from W line of N 30-ac., Tract 393, Por. 39.
Location.
Rogers O. & G. Co.'s No. 1 Guerra.
Location.
Ed Sullivan's No. 1 E. B. Guerra, center of NE 10.77 acres of SW 40.7 acres of Tract 254, Por. 39.
Location.
Ed Sullivan's No. 1 E. Flores, 330 ft. N line, 107 ft. E and W lines of Tract 266, Por. 38.
Location.
Van Dresar et al's No. 1 W. R. Jackson, 330 ft. from N and W lines of 92-ac. tract, Por. 38-39-40, Blk. 273.
Location.
Weekly Oil Corp.'s No. 1 Smith, Tract 278, Porcion 40.
Spudded.
Otto Woods' (Kingwood) No. 4 F. B. Guerra, 330 ft. S and E lines of NW 30 acres of S 150 acres, Tract 254, Por. 39.
Location.
Otto Woods' No. 4 John Lawrence, 330 ft. from E line, 250 ft. from S line of W 40 acres, Tract 274, Por. 39.
Rigging up.

JACOB POOL—McMULLEN COUNTY

American Gas Co.'s No. 1 L. Jacobs Corp., 350 ft. W of SE cor., 160 ft. SE line of tract in Fadden Sur.
Spudded and S.D.
Jane Oil Co.'s No. 3 H. L. Lark, 500 ft. N of No. 2.
Spudded.
Leonard Jacob Corp.'s No. 2-F Jacob, 990 ft. from S and W lines of 99.72-ac. tract in N part of John Fadden Sur.
Set csg. 862 ft.
Loma Oil Co.'s No. 31-A Jacob, 660 ft. N of 30-A.
Drlg. plugs at 980 ft.
Loma Oil Co.'s No. 32-A Jacob, 660 ft. S of No. 31-A.
Location.
Motes & Bettfield's No. 2 H. L. Lark, 660 ft. N of No. 1, Scrugham Sur.
Drlg. plugs at 995 ft.
Newton et al's No. 1 Murphy, SW cor. of Sur. 490.
Drlg. 1,610 ft.
Stewart & Holding Co.'s No. 3 Jacob, 660 ft. S and 660 ft. E of No. 2, John Fadden Sur.
T.D. 895 ft.; S.D.
R. P. Whitefield's No. 3 Jacob, 240 ft. E line, 275 ft. S line of 70-ac. tract out of NE cor. Sec. 9, 314 ft. S of No. 1.
Drlg. plugs 916 ft.

SINTON—SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 3 R. Welder, 466 ft. from S line, 2,000 ft. from E line of Adeline Welder tract in Victor Loupsey Sur.
Derrick.
Heep Oil Corp.'s No. 4 R. Welder, 466 ft. from S and W lines, 300-ac. tract, Victor Loupsey Sur.
T.D. 7,220 ft.; perforated csg. at 5,883 ft.
Plymouth Oil Co.'s No. 2-B Welder, start at SW cor. of "B" lease, thence NW along the W line 2,100 ft., thence 350 ft. NE at R/A.
Drlg. 4,700 ft.
Plymouth Oil Co.'s No. 3-A Wheeler.
Location.

LOS OLMOS—STARR COUNTY

J. P. Kennedy's No. 3 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77.
Drlg. 455 ft.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant.
Location.

RIO GRANDE CITY—STARR COUNTY

Goodwin & Zimmerman's No. 1 Ida Davis, 33 ft. SW line, 576 ft. NW line of Blk. 16, Tract 4, Share 78, Por. 81.
Testing 1,450 ft.

AGUA DULCE—NUECES COUNTY

Clymore Prod.'s No. 3 Ingram, 660 ft. from E and S lines, Sec. 6, Blk. 6, Peters Subd.
Derrick down.
Clymore Prod. Co.'s No. 3-D Ingram, 660 ft. from S and W lines of Lot No. 7, Sec. 6, Peters Subd. No. 2.
Location.
Clymore Prod. Co.'s No. 1-C Ollie Purl, 660 ft. N and E lines of Lot No. 2, Sec. 7, Peters Subd. No. 2.
Moving in rig.

SARLET—NUECES COUNTY

Southern Mineral Corp.'s No. 4 Ocher, 1,290 ft. S line and 417 ft. E line of Ocher 202.52-ac. tract in Sec. 8.
Location.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 6-A Bruni, 330 ft. NW line, 1,003 ft. SW line of Sur. 6.
T.D. 3,456 ft.; P.B. to 2,300 ft.; W.O.C.
American Liberty Oil Co.'s No. 7-A Bruni, 2,172 ft. NW line, 777 ft. SW line of Sur. 6, Foltz Subd., M. Arispe grant.
Set csg. 300 ft.
American Liberty Oil Co.'s No. 9-A Bruni, 260 ft. NW line, 418 ft. NE line of Blk. 47, Sur. 8.
Drlg. 3,400 ft.
American Liberty Oil Co.'s No. 2-B Bruni, 418 ft. NE line, 260 ft. NW line of Blk. 12, Sur. 5.
T.D. 3,447 ft.; I.P. 11 bbls. per hr.
Herman Brown's No. 4 Bruni Est., 418 ft. NE line, 260 ft. SE line, Blk. 7, Sur. 5, Arispe grant.
Set csg. 300 ft.; W.O.C.
Cole Pet. Co.'s No. 38 R. Benavides, 990 ft. SW line, 330 ft. SE line, of Sur. 1.
Derrick.
Highland Oil Co.'s No. 1 Bruni, 152 ft. SW line, 330 ft. NW line, Sur. 7.
Coring 3,395 ft.
Kamore's No. 1-B Bruni, 330 ft. to W line, 418 ft. SW line, Blk. 23, Sur. 5, Adams Subd., Mariano Arispe grant.
No report.
O. W. Killam's No. 29 Bruni, 1,287 ft. SE line, 1,950 ft. SW line of Share 6, Arispe grant.
T.D. 3,418 ft.; I.P. 25 bbls. per hr.
Magnolia Pet. Co.'s No. 5 Brennan-Benavides, 254 ft. NW cor. of Blk. 456-487, on lines of Blk. 466-467, M. E. Hale Subd., Arispe grant.
Location.
Sun Oil Co.'s No. 2 Bruni, 418 ft. NE line, 260 ft. SE line, Blk. 9, Sur. 5.
Coring 3,000 ft.
Starr State Oil Co.'s No. 11 Yeager, 200 ft. S line, 450 ft. E line of 632-ac. tract in Share 5 of Los Animas grant.
Coring 3,455 ft.

BLAS URIBE—ZAPATA COUNTY

O. W. Killam's No. 9 Bruni, 199 ft. SE line, 400 ft. NE line of Blk. 9, Blas Uribe tract, Borrego grant.
Rigging up.

ESCOBAS—ZAPATA COUNTY

United Prod. Co. et al's No. 1 Ramirez, 221 ft. from NE and SE lines of lease.
T.D. 2,246 ft.; comp. 6,000,000 ft. gas; 800 lbs. R.P.

JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 59 Whitehead, 1,765 ft. from SE line, 17,110 ft. from SW line of Cerrito Blanco grant.
Drlg. 1,010 ft.

MARTINEZ—ZAPATA COUNTY

Benn Banner's No. 1 M. Trevino, 556 ft. N line, 200 ft. E line of Blk. 17, Sur. 411.
Location.
S.R.C. Oil Co.'s No. 4-F Cuellar, 1,190 ft. E line, 160 ft. N line of Blk. 20, Sur. 411.
Skidding.
S.R.C. Oil Co.'s No. 5-F Cuellar, 200 ft. E line, 1,534 ft. N line of Blk. 21, Sur. 411.
Location.
S. R. C. Oil Corp.'s No. 3-F Trevino, 261 ft. N line, 155 ft. E line of Blk. 21, Sur. 411.
T.D. 1,676 ft.; comp. 20,000,000 ft. of gas; 620 lbs. R.P.

RANDADO—ZAPATA AND JIM HOGG COUNTIES

Sulgrave Oil Co.'s No. 1-D Maryland Trust Co., 660 ft. S line and common lines of Blk. 3-4, Tract "D," Sur. 214.
Set 7-in. csg. 1,665-75 ft.; W.O.C.

Two Wells in Dickinson Area, Galveston County; Calhoun County Well Makes 151 Bbls. Distillate

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Dec. 3.—The Dickinson Area, Galveston County, was added to the commercially productive fields of the Gulf Coast during the week when two wildcat wells drilled simultaneously by Humble Oil & Refining Co. and Pure Oil Co. were completed as producers. Humble Oil & Refining Co.'s No. 1-B Maco Stewart in the John Sellers Survey was the first completed. It started flowing pipe line oil November 27 and from last reports it was flowing steadily approximately 130 bbls. of 37 gravity oil per day through three-eighths choke with tubing pressure 640 pounds and casing pressure 850 pounds. It was drilled to a total depth of 8,070 feet where it showed salt water and was plugged back to 8,024 feet. It is producing from 21 feet of sand at 8,003-24 feet.

Pure Oil Co.'s No. 1 Shelor, approximately a half mile northeast in the B.B.B.&C. Survey, was completed as a wet gasser at a total depth of 8,016 feet. Seven-inch casing was cemented at 7,929 feet and the operators set 82 feet of screen on bottom. The well was washed for one hour, and came in natural flowing one barrel of distillate per hour through a three-eighths-inch choke with tubing pressure 2,000 pounds and casing pressure 300 pounds. It is the general opinion the screen may be set too high, and it is understood the operators will watch its performance for several days and then make decision whether to reset the screen or carry the well deeper. Based on top of the Frio, the producing horizon, it is approximately 119 feet higher than the Humble Oil & Refining Co.'s No. 1-B Maco Stewart.

This geophysical prospect has been looked upon as a proven area ever since Humble Oil & Refining Co.'s No. 1 Maco Stewart, the first test drilled, blew out last August at a total depth of 7,887 feet. That well caught fire and ran wild for several hours before sanding up. It was abandoned, although it is reported that later the operators may attempt to go back into the hole.

Location has been made by Humble Oil & Refining Co. for another test to be drilled on the Donaldson tract, approximately one-half mile south of the original blow out test in the John Sellers Survey.

Calhoun County

Steen Drilling Co.'s No. 1 Stanzel, 1 mile north of Port Lavaca, Calhoun County, which opened the first production in the county last week, continues to make distillate and from last reports it was making approximately 151 bbls. in 24 hours with tubing and casing pressure 2,000 pounds. It is flowing through a three-sixteenths-inch choke and is producing from the Frio formation bottomed at 6,168 feet. The operators have erected one 1,000-bbl. tank and two 500-bbl. tanks. It is on a block of approximately 2,800 acres, with Sun Oil Co., Magnolia Petroleum Co., Crown Central Petroleum Corp. and Lavaca Oil Co. holding the nearest production acreage. The nearest production is the Keeran Field 10 miles northwest in Victoria County.

Harris County

In Harris County, C. B. Bunte, Inc.'s No. 1 Laura Lackner, a wildcat on the outskirts of the Houston City limits, that opened another field last week, has cleaned itself and is making approximately 25 bbls. of distillate per day, with pressure on the casing and tubing equalized to 2,500 pounds. It is producing from 37 feet of sand, bottomed in the Cockfield formation at 7,686 feet. It is in the H. Reinerman Survey. The operator of the discovery well is on a deal with the Alamo Drilling Co., which drilled the discovery well, for a 7,750-foot test on a 40-acre tract out of H. E. Neuhaus 167-acre tract in the W. P. Morton Survey. Location is to be approximately 700 feet north of the south line and 2,750 feet east of the west line of 107-acre tract. The test is to be started within 30 days.

In the northeastern part of Harris County the wildcat of W. C. Paul and others' No. 1 House is drilling in shale below 6,900 feet. It topped the Hockleyensis at 6,270 feet and is reported to be running low on this formation. Location is on the M. Magruder Survey.

Farrell Drilling Co. has forfeited its lease to H. C. Cockburn for failure to drill No. 1 E. R. Brooks, abandoned some time ago. It is reported Mr. Cockburn has turned the leases to Temple Hargrave who will drill a 6,000-foot test in the Richard and Robert Vence Survey. Several major companies are reported to have purchased spread around this proposed wildcat test.

Tomball Extension

A 1-mile northeastern extension to the Tomball Field, Harris County, was registered when Humble Oil & Refining Co. completed its No. 1 Gossett in the Elizabeth House Survey for an initial production of 312 bbls. in 24 hours through a quarter-inch choke. It topped the sand from 5,552-72 feet, the total depth. Seven-inch casing was cemented at 5,550 feet. It is one mile northeast of the company's No. 1 John Holderith, nearest producer, and its completion for a producer proves considerable acreage southeast of the field heretofore considered nonproductive.

Kittrell Field

Interest in the Kittrell Field, southern Houston County, was revived when Humble Oil & Refining Co.'s No. 2 Shaw, a short distance northwest from the discovery well, was completed for a good producer. After being completed for a small gas well last week at a total depth of 2,000 feet, the operators deepened it to 2,015 feet, total depth, and found the top of the sand at 2,005 feet. Two and a half-inch tubing was swung at 2,014 feet, and after swabbing for a short while it came in for 28 bbls. per hour through a three-eighths-inch choke. With the field defined in every direction but northwest, little attention was given the feld, and it is believed now a fault line exists in the area running from the discovery well northwest, and there is a possibility several more wells will be completed in this direction. Boone Brothers, the discovery operators, have made location for No. 2 Trinity State Bank, a southeast offset to Humble Oil & Refining Co.'s No. 2 Shaw, and cemented surface casing. It is 660 feet southwest of their No. 1 and 330 feet from the property line in the Charles McEllis Survey. One mile due north of the discovery well, Humble Oil & Refining Co. abandoned its No. 1 Texas Long Leaf Lumber Co. at a total depth of 3,870 feet after failing to recover a stuck drill stem. It is in the Charles McEllis Survey. In the adjoining county, 10 miles southwest of the Kittrell Field, in Walker County, Texas Company's No. 1 Thompson Brothers Lumber Co., a wildcat test in the Holcombe Survey, is drilling in shale below 2,564 feet. In the same area, but in Trinity County, Rheubotham and others have organized the Glendale Oil & Gas Co. and have made location for No. 1 E. A. Tullos in the Juan Cruze Survey for a 3,500-foot Wilcox test. It is on a block of approximately 1,500 acres and is 330 feet from the south line and 660 feet from the west line of the north 40 acres out of the west 100 acres of the Tullos tract.

Cleveland Area

The Cleveland area, Liberty County, got two locations by independent operators. Black Gold Petroleum Co. of Oklahoma has made location for No. 1 R. D. McDonald, due west of Gulf Production Co.'s No. 6-C Kirby, a producer in the T. Devers Survey, on the west side of the field. The other location was made by William J. Colegrove and others for No. 1 State School Land and Development Co. in the Clayton Hooper Survey, 466 feet west and 170 feet from the south line of survey. It is due west of Gulf Production Co.'s No. 1 Grogan, abandoned at 5,916 feet. The two locations are the first by independents and are reported located on excess acreage. The field was discovered by Gulf Production Co.

Waller County

On the San Felipe Dome (Brookshire) Waller County Seaport Oil Co.'s No. 1 Avery, 1,500 feet due south of the operators' discovery well in the John McFarland Survey, has the appearance of making a small pumper. It topped the sand at 2,848 feet, showing oil, but failed to flow when tested at a total depth of 2,878 feet. It is standing with 400 feet of oil in the hole and the operators are preparing to put it on the pump after it failed to register any pressure. Three miles southeast of the discovery well, Texas Company has derrick up for No. 1 J. H. Jones in the William Cooper Survey, 330 feet each way from the north and northwest lines of lease.

Liberty County

In the Hardin district, Liberty County, the wildcat of Turnbull and Irwin's No. 1 Lynott and Buffum, in the James Robinson Survey, has cemented 7-inch casing bottomed at 7,511 feet and is preparing to drill plug. It is reported the operators will perforate the casing and make the first test from 7,398-7,406 feet and if this is unsuccessful a test will be made from 7,660-72 feet. It is bottomed in the Cockfield formation with the top reported at 7,045 feet. Several weeks ago this was one of the most watched wildcat tests on the Gulf Coast, but its chances now are unfavorable.

Jefferson County

Magnolia Petroleum Co.'s No. 1 Herbert Trust, a wildcat in the P. H. Bell Survey No. 2, southern part of Jefferson County, has been abandoned at 9,708

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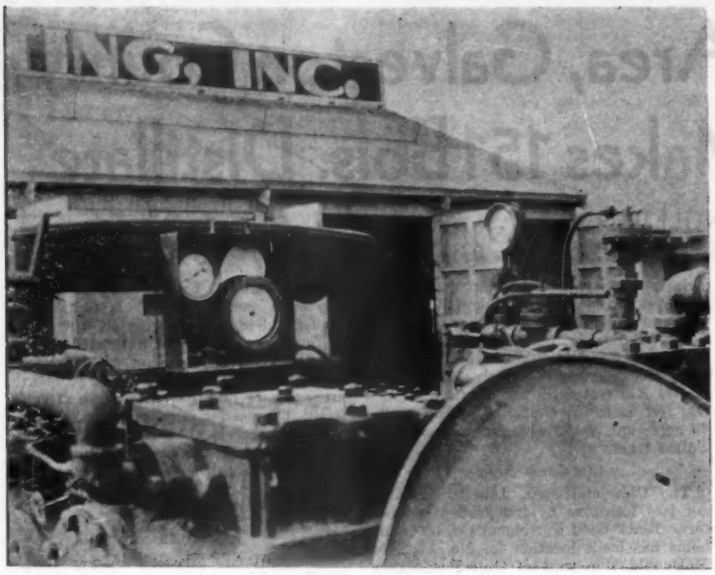

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feet after an electrical coring test showed nothing of importance. Northeast, Sun Oil Co.'s No. 1 Hugh Long in the John Blair Survey is coring in shale below 8,553 feet.

Wildcatting development was confined to Madison and Grimes Counties in Madison County, Texas. New York and others are building derrick for their No. 1 Ferguson, in the J. H. Pearson Survey, 3,000 feet east and 1,750 feet south of the northwest corner of the J. H. Pearson Survey. Two miles southwest of Kilium Springs in Grimes County, Roan and others have made location for No. 1 G. W. Sealy in the B. F. Smith Survey, 3,474 feet north of south line and 820 feet east of the west line of survey.

Refugio County

In Refugio County, Conroe Oil and Santa Clara Oil Co. have abandoned No. 1 Miss Ella West, a wildcat in the western part of the county at 6,005 feet, after an electrical coring test failed to indicate any prospective producing horizons. Northwest of Dale Sneed's No. 1 Peck, Price and others are reported to have made plans to drill on the Jurica land. It is expected to be drilled in northwest corner of the south one-half of the southeast quarter of Section 37. In the same county but in the Bonnieview district, Magnolia Petroleum Co. has made location for No. 1 F. B. Rooke, 2 miles northwest of Woodsboro in the Dona A. Reogas Survey.

Louisiana Gulf Coast

Interest on the Louisiana Gulf Coast is again centered on the Gillis area, Calcasieu Parish, where Union Sulphur Co.'s No. 1 State Land in Section 12-9s-12w, three-quarters of a mile northeast of its No. 2 Barbe, discovery well, is preparing to cement casing at 6,749 feet on top of sand that showed up favorably on an electrical coring test which showed 19 ohms in sand from 6,749-59 feet, the total depth, and is considered having a good chance of making the second producer. The total depth is 12 feet higher than No. 2 Barbe which is producing from a total depth of 6,771 feet, believed to be the Marginulina formation. One mile due south of No. 2 Barbe, Fohs Oil Co.'s No. 1 O. H. Castle in Section 13-9s-8w is preparing to drill deeper after an electrical coring test made at 5,012 feet showed nothing of importance.

In the Bosco Field, Acadia and St. Landry Parishes, Superior Oil Producing Co.'s No. 3 Hermandes in Section 34-8s-3e cemented 9⅝-inch casing at 7,836 feet and was completed for an initial production of 858 bbls. per day through a thirteen-sixteenths-inch choke with tubing pressure 1,300 pounds and casing pressure 1,300 pounds. The same company's No. 1 Malancon, the deepest test in the field, has been plugged back to 8,670 feet and is waiting on cement to set. It was originally drilled to 9,455 feet. It is in the south end of the field in Section 34-8s-3e.

Shell Petroleum Corp.'s No. 1 Jarnigan, a deep test in the Roanoke Field, Jefferson Davis Parish, is coring in shale with new shows reported. It is an east offset to the discovery.

In the Iowa Feld, Shell Petroleum Corp.'s No. 5 Stafford has been completed for an initial production of 730 bbls. in 24 hours through various chokes at a total depth of 6,978 feet. It is in Section 18. Magnolia Petroleum Co. made location for its No. 11 Wait. Location is 330 feet east and 330 feet north of the southwest corner of the northeast quarter of the southeast quarter of Section 12-9s-7w.

In the Gueydan Field, Vermillion Parish, Pure Oil Co.'s No. 6 Alliance Trust Co., a deep test on the northwest edge of the field, which has had a fishing job for several weeks at 9,379 feet, has been plugged back and is now being sidetracked at 6,190 feet. It is in Section 33-11s-1w.

Trend to Better Prices in the Chicago Market

(Continued from Page 41)

quite firm and is not in very large supply. Gasoline and distillates on each side of it are exercising a favorable influence.

Heating Oils

While weather has not yet been extremely cold, the demand for heating oils is keeping well up with supply, and most of the key grades are in firm market position, with some sellers asking higher prices. Little of this material is coming out of East Texas.

Industrial Products

No pronounced improvement has come into industrial oils, with the exception of dark gas oil, which is fractionally stronger. Industrial activity is slowly stepping up and some improvement in tank car business on contracts is reported.

Lubricants

Changes are few in lubricants. Winter motor oil business at service stations has been fairly good. Compounders and jobbers are strictly moderate buyers in the open market. Prices show little change.

Wax

Demand for various grades of wax is about steady. High melting point items are mostly favored. Stocks are still not very troublesome.

Naphthas

Slight pickup in various consuming lines is noted here and there in the demand for certain grades of naphthas and solvents, but prices are unchanged, and the market seems fairly well stabilized.

Petroleum Coke

Petroleum coke has shown no change for some time marketwise. Movement of material is accounting pretty well for the current rate of output and no particular trouble is being encountered in moving material at prevailing prices.

Wildcat Operations on Gulf Coast

Week Ended December 1

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 10 Paine. Comp. T.D. 4,115 ft.; L.P. 64 bbls. per hour, ¼-in. choke.

Humble O. & R. Co.'s No. 1 Hill, Wm. C. White Sur. Location.

Humble O. & R. Co.'s No. 10 Arthur Marten, 315 ft. from SE and 313 ft. from SW line of lease, Wm. C. White Sur. Rigging up.

Humble O. & R. Co.'s No. 8-X Sanders, 738 ft. at R/A from N line, 250 ft. at R/A from most easterly line, Wm. C. White Sur. Drlg. shale 5,527 ft.

Humble O. & R. Co.'s No. 2-X Zeiske, 949 ft. northeasterly along SE line, 331 ft. northwesterly from SE line, Wm. C. White Sur. Drlg. shale 3,778 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 63 deg. 11 min. E, 5,540 ft. N, 26 deg. 49 min. W, 200 ft. from SW cor. of Blakely-Winston 566-acre tract, H.T.&B. Sur. 12¾-in. csg. at 2,000 ft.; T.D. 3,417 ft.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, E.&T.B. Sur. No. 12. Coring sandy shale 6,924 ft.

DAMON MOUND—BRAZORIA COUNTY

Gulf Stream, Inc.'s No. 1 Cave Heirs, 160 ft. from N line and 60 ft. from E line of Lot C, Blk. 50, A. Darst Sur. Running 7-in. csg.; T.D. 1,312 ft.

Exco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur. Drlg. 1,623 ft.

Intercoastal Oil Co.'s No. 12 Wisdom, 90 ft. from N line and 25 ft. from W line of Lot A, Blk. 51, A. Darst Sur. Drlg. shale 2,923 ft.

MANVEL—BRAZORIA COUNTY

Bowles & Barsodi's No. 1 Norvell Investment Co. in center of Lot 47, H.&T. Sur. No. 23. Location.

Texas Co.'s No. 12 Houston Oil Field Assn., 2,475 ft. S and 330 ft. E of NW cor. of Lot 5, A.C.H.&G. Sur. Dry gumbo and lime 3,818 ft.

Texas Co.'s No. 15 Houston Oil Field Assn., 441.9 ft. W and 247.5 ft. S of NW cor. of Lot 7, A.C.H.&B. Sur. Derrick.

Texas Co.'s No. 1 Wray, 330 ft. N, 42 deg. E of W cor. of lease, Thos. Spraggins Sur. Rig up.

(Continued on Page 82)

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Among Gulf Coast Drilling Contractors

J. S. Abercrombie has leased a rotary rig to Solvay Process Co. for use in drilling three or four brine wells on Choctaw Dome, near Plaquemine, La. John Bass, head driller for Harrison & Abercrombie on that company's producer recently completed at 8,651 feet near Old Ocean, Brazoria County, will supervise the rig operations at Plaquemine.

Watts and Phillips have contracted to dig a 3,500-foot test through the Wilcox formation for Rheubotham and others near Glendale, Trinity County, Texas. Same operators have leased a rig to H. C. Cockburn, independent oil operator of Houston, who is preparing to drill his sixth test at Sheppards Mott, Matagorda County, Texas.

B. J. (Bird) Smith is moving a rig to a wildcat location to drill a well for Douglas and others about 5 miles east of Shiner, Lavaca County, in the M. Mitchell Survey. This test is scheduled to go to 5,500 feet.

Mid-Continent Drilling Co. is rigging up to make a second test on the Kurten Dome prospect, 9 miles north of Bryan, in Brazos County. This test will be carried first to the Sparta formation which, if found unproductive, will lead operators to go to the Carrizo formation.

George Echols is moving his heavy gasoline rig from lower Southwest Texas to Harris County, to drill a 6,500-foot test for W. L. Goldston on the east 122 acres of Survey 39, Block 2. The test will be on what is known as the Ogburn Dome, near the well in which it is rumored that General Crude Oil Co., on its last test, cored several feet of sand.

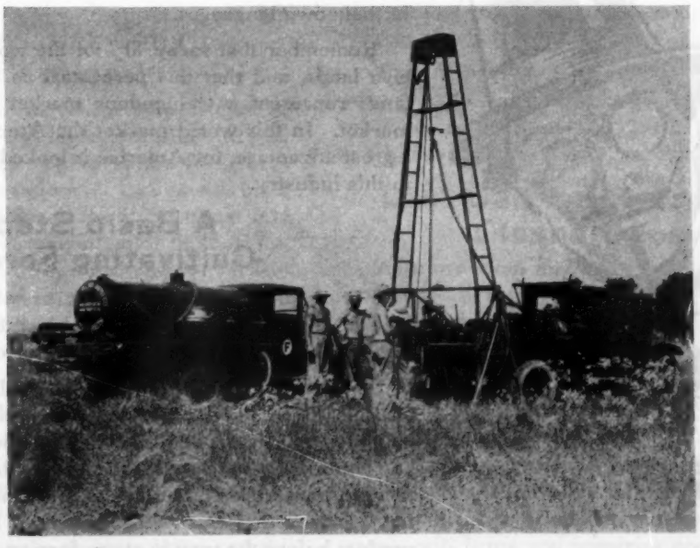
W. Claud Smith has about completed a workover job for Texas Co. in the Conroe Field, and is preparing to rig up on a new location for the same company in the Tomball Field, Harris County.

Complacent gentlemen of the oil industry who have long felt that theirs is a two-fisted business reserved entirely for the male members of the race may be shocked to learn that the T. S. & F. Oil Co., whose name is derived from the first initial of the surnames of its three women executive officers, has rig up and is preparing to spud a 6,000-foot test near the historic site of the San Jacinto Battle Grounds, Harris County. Miss E. Ferdie Trichelle, Mrs. Elna Settlemyre and Alice H. Finfrock are the principals of the T. S. & F. Oil Co. Scouts familiar with the area give the feminine operators a more than even chance of making a well.

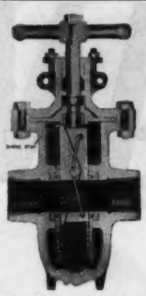
L. W. Capps, who has just completed a producer for the Naylor Oil Co. in the Rabbs Ridge Field, Fort Bend County, is preparing to move rig to a new location for the same operators in the same field, to drill No. 7 Gehr. Capps recently completed No. 1-A Avery on the San Felipe Dome, Waller County, for a pumper. Pumping unit is now being installed.

Gohlson Drilling Co. has started its well for C. L. Smith and others which is to be a wildcat test to go 5,500 feet in Starr County, about 35 miles northwest of McAllen, Hidalgo County. Same contractors are completing derrick for a second well for themselves and C. L. Smith in the Sam Fordyce Field, Hidalgo County. Company's cable tool well in Bandera County, which set surface casing at 1,180 feet, is preparing to drill out below surface to complete the test.

Tip DeArman, of DeArman Brothers, drilling contractors, suffered a broken knee cap in an automobile accident in Houston recently. It is expected that he will be confined to the St. Joseph's Hospital for several weeks.



Despite appearances to the contrary, this is not a core drilling crew on the African veldt, but one of the shot-hole crews of the George E. Failing Supply Co., contractors. The young men in the picture were once dapper collegiates and ranking students in the engineering departments of their respective schools. High speed work on the sun baked prairies of the Gulf Coast has, as may be seen, induced them to go native—well, half native, anyway. With the equipment shown, which includes a complete rotary drilling rig, slush pump, foldback derrick, etc., holes are quickly drilled to 40 or 50 feet, and small charges of high explosives are detonated to create miniature earthquake waves, which are in turn picked up and recorded by geophysical instruments. In this manner, geophysical "pictures" are developed, and many new domes have recently been discovered in the Gulf Coast by geophysical means. These men are the forerunners of the heavier drilling rigs which follow after and bring in the oil fields. Many similar crews are constantly active on the Gulf Coast of Texas and Louisiana, and the results of their work are expected to keep drilling contractors busy for years to come.



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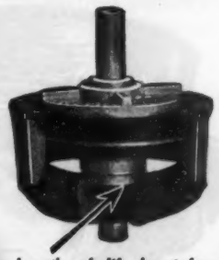

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MANY of the KEY MEN in operations do not

ADDRESS

Many of the key men in foreign oil operations do not speak English, and this number is growing as petroleum becomes less and less an exclusively American industry and more and more a world industry. While there are many Americans and Englishmen engaged in foreign oil operations, there is a constant tendency for native Russians, Roumanians, East Indians, South Americans, Mexicans—men of education and means—to engage in this important industry in their respective countries.

Many of these men, though well educated, do not speak English. Some, through association with English-speaking people, can understand and read English a little, but prefer their native language. The number of key men of this class in the Oil Industry in foreign lands more than justifies the American equipment manufacturer in addressing these men *once each year*, in their own languages.

Remember that today 40% of the world's petroleum is produced in foreign lands, and that this percentage is almost certain to increase. These lands represent a tremendous market for oil equipment, and a *growing* market. In this world market the American equipment manufacturer has a great advantage, for America is looked up to as the pioneer and the leader in this industry.

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For the American manufacturer who wishes to cultivate this world market, The Oil and Gas Journal has developed its annual "Export Number," with a catalog section printed in four languages.

The Oil and Gas Journal has a paid foreign circulation of about 1,000, but this issue is given a total Foreign circulation of 2,000 copies. We have compiled accurate lists of the key men in the industry in foreign countries, and those not already included on our list of paid subscribers will be sent this issue with our compliments. Thus this issue will reach *comprehensively* the key men in foreign oil production. It will place a description of your product before the men in every foreign oil field who buy equipment, and it addresses those who do not speak English in their native tongues.

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That the foreign oil men appreciate this is attested by letters we have received from them thanking us for this foreign-language issue and stating *they* preserve it as a reference catalog for an entire year. As regards actual pulling power of advertising in this issue, we have letters from American manufacturers reporting large export orders which have resulted directly from their advertising in our 1933 Export Number, and statements from others that their foreign business, fostered by this advertising, has proved a fine balance wheel, foreign business at times having constituted an important part of their active volume.

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Here is our special offer. Each advertiser using a page of space, in the advertising section of this issue, is entitled to representation in our foreign language section in the form of a half-page write up, containing illustrations of equipment, brief description in English, and translations of the English text into Russian, Spanish and French. The extra charge for this service, over and above the regular cost of your full-page advertisement, will be $40,—which no more than covers our actual cost for this service, including the expert translations and typesetting by foreign-language newspapers published in New York.

Advertisers using double-page spreads are entitled to two half pages or one full page in the Foreign section, and the extra charge will be $80. Advertisers using half-page space in the regular section, are entitled to a single-column or quarter-page write-up, at an extra cost of $20. Smaller than half-page space in regular section is not entitled to space in the foreign section, as less than quarter page is inadequate to carry these translations.

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In preparing your catalog text, please follow these instructions carefully: Merely send us a very simple description of your products in English *carefully avoiding all technical and slang phrases* as they cannot be clearly translated into foreign languages. Accompany this with your literature so that our translator may have it for reference. To figure the number of words that may be used, refer, in last year's Export Issue, to a write-up occupying the space you propose to use and containing a cut of approximately the size which you plan to use. Then by counting the words in the write-up, you will arrive at the correct number. Or—write at once for our Instruction Book.

The Oil and Gas Journal reserves the right to edit all catalog copy so as to make it fit the space allocated. This is necessary since descriptions must be sent to New York, there translated, set in the correct foreign type, electroplated and returned to us.

Last Call for Space Reservations! Closes December 17th

As translations and other special details take much time, we cannot accept copy for the Foreign section after December 17th. This means that you should make your space reservation at once and let your copy and cuts follow at the earliest possible date. Copy coming in after December 17th may have to go to press without the very important Russian translation, and without being set in the proper French and Spanish type.

Millions of foreign dollars will be spent for oil equipment in 1935. We believe that an advertisement in this one issue, which has a life of an entire year on the desks of foreign oil men,—will bring you inquiries and orders from abroad worth many times its small cost.

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Five Completions Add 4,000 Bbls. to Potential Daily Production of the Michigan Fields

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Dec. 3.—In contrast with a reduction of 1,100 bbls. a day in the Federal allowable for Michigan from 29,000 bbls. a day in November to 27,900 bbls. in December, about 4,000 bbls. of new daily production was added to the state's total potential principally by five oil completions in the Porter Township Pool of Midland County.

Completion of three tests drilling into the Dundee pay sands in West Branch Township, Ogemaw County, and one in the Vernon Township, Isabella County, Pool last week, but not yet placed in production, was expected to add a considerable amount of new oil production with other possible completions this week.

One small gasser also was finished in the Broomfield Township, Isabella County, Field, while five dusters and one abandoned location also appeared in the week's report on 16 projects virtually completed.

Midland County

The largest new producer in Midland County was the Pure Oil Co.'s No. 4 Floyd Younglove, NW SW SW Section 17-13n-1w, Porter Township, which was rated at 2,185 bbls. a day in the Dundee at a total depth of 3,393 feet. It made 155 bbls. during the first hour.

Four others previously drilled into the Dundee pay sands were completed after acid treatment for daily production ranging from 104 to 800 bbls.

Richard Hall's No. 2 Harris-Bond, SW SW SE Section 7, Porter, was increased from 96 bbls. natural the week before to about 800 bbls. estimated daily for an increase of over 700 bbls. every 24 hours. It flowed 75 bbls. in the first hour after topping the Dundee at 3,400 feet and completing at 3,439 feet. It was of special interest as a northwest extension.

Pure Oil Co.'s No. 3 Younglove, SE SW SW Section 17, same township, was rated at 649 bbls. a day at a total depth of 2,414 feet. Pure's No. 6 Charles Hill, SW SE NE Section 18, made 152 bbls. at 3,437 feet after drilling into Dundee oil sands two weeks before with a hole full of oil.

Fred J. Turner and others' No. 1 Roy Miller, SE SE SW Section 8, was good for 104 bbls. a day in the Dundee topped at 3,380 feet and bottomed at 3,427 feet after striking pay sands from 3,398 to 3,405 feet and being acid treated.

Pure Oil Co.'s No. 4 C. D. Alexander, SE SW SE Section 18, same township, estimated good for 750 bbls. the week before actually made 708 bbls. at 3,407 feet.

One failure and an abandoned location also were reported in Porter Township last week. The former was C. W. Teater's No. 3 Joseph M. Wale, NW NE NW Section 22, which struck a good show at 3,375 feet after topping the Dundee comparatively high at 3,356 feet but ran into bottom water, was plugged and abandoned at 3,406 feet. Failure of this test to make commercial production was a surprise as it was a direct south offset to Pure Oil Co.'s No. 11 Mina Narmore, one of the larger producers in this section of the Porter Pool.

McHugh Oil Corp.'s No. 1 Caywood, NE NE NE Section 30, was abandoned though elaborate preparations for drilling had been made some months ago, including erection of a rig, a luxurious camp house, an electric light plant and tools. Permit originally was taken out in the name of James P. McHugh, trustee, when the rig was erected early this year. Failure of McHugh's No. 1 Breckenridge State Bank on the Holsel lease directly across the road in Section 29, Porter Township, completed last month as a "duster," was believed to have led to abandonment of the Caywood.

Eight other projects were drilling in Porter Township, 14 starting and one location. Three nearing completion were Sun Oil Co.'s No. 7 on the Miller estate, NW NE SW Section 16, Garfield Oil & Gas Co.'s No. 1 Mabel Finch, SW SW SE Section 21, and Columbia Oil & Gas Co.'s No. 1 Henry Northrup, NE NE SE Section 19.

Mills Township—Midland

Operators were disappointed in the failure of Goll, Graves & Mechling's No. 1 H. A. Crane, NW NW NE Section 21-16n-2e, Mills Township, Midland County, which struck bottom water at 185 feet in the Dundee, or at 3,689 feet. Some hopes for the discovery of a new central Michigan producing area had been held out when this test struck the Red Rock and Traverse structures at comparatively high levels.

Same operators immediately started their No. 1 Oviatt estate, SW SE SW Section 24, Mills Township, in the further hope of locating production in the Mills and Lincoln Township area northeast of the Porter Pool, where the existence of a structure sufficiently high to indicate possibilities of production has been partly proved. The No. 1 Crane will be plugged and abandoned.

Jasper—Midland

Pure Oil Co. last week started deepening its No. 1 Bond-Root, C N SE SE Section 3-13n-2w, Jasper Township, Midland County, which had been producing from the upper Traverse pay sands at 2,924 feet since it was brought in last March with an initial of 204 bbls. a day at this depth. It will be carried to the Dundee. It is located in the Yost Field.

Three other tests were active in Jasper Township, including George Hanners' No. 1 C. W. Hoyt, NE NE NE Section 24, drilling at more than 3,000 feet after striking a good show of oil and gas in the upper Traverse at 2,829 feet. Pure's No. 3 Bond-Root, C N NE NE Section 3, also was nearing the upper Traverse while John Martin's No. 1 R. Greene, NE NE NE Section 13, was driving pipe. Two new tests also were starting in Greendale Township, Midland County.

Isabella County

Although there were no new important completions in Isabella County, greatly increased activities were evident in this section of central Michigan with about 25 projects under way and half a dozen others contemplated.

Several factors have contributed to this newly awakened interest in Isabella County, including the Wittmer Co.'s completion of four commercial wells in the vicinity of Rosebush, Isabella Township, about half way between the Leaton and Vernon Pools, McClanahan Oil Co.'s discovery of two producers about midway between the Leaton and Chippewa Fields and the decline in Porter Township, Midland County, leading operators to survey new territories.

Vernon Township—Isabella

One test was drilled into the Dundee pay sands in Vernon Township last week with prospects of completion as a commercial producer. It was Morris-Van Keuren Oil & Gas Syndicate's No. 3 Bowman heirs, NW SE NE Section 27-16n-4w, which topped the Dundee limestone at 3,760 feet and suspended operations at 3,798 feet to install field tanks. It filled up 1,000 feet in two hours.

Old Dutch Oil & Gas Co.'s No. 2 Michael McGuire, C SW SW Section 36, Vernon, was nearing the Michigan Stray gas sands. One other test not yet completed in Vernon was shut down after failure to strike gas in the Michigan sands, namely, W. Hunter Atha's No. 1 Ed Little, NW SW SE Section 31, drilled to 1,470 feet.

Broomfield Township—Isabella

A small gasser in the Michigan sands was completed by the Michigan Cities Natural Gas Co. when its No. 2 Ada Skarritt, C SE NE Section 5-14n-6w, Broomfield Township, Isabella County, made about 400,000 cubic feet a day at 1,397 feet after a shot.

Same company's No. 5 Keeler-Mitchell, C SE NW Section 10, in the proved Broomfield gas field, was expected to be completed in the Michigan sands this week. One other test, Arbauch Brothers' No. 1 Ray Aldrich, C NE SE Section 22, was still having difficulty with a fishing job just above the Michigan pay sands while Chippewa Oil & Gas Co. started a new test in Section 15.

Sherman Township—Isabella

Youmans-Wyckoff Oil & Gas Corp.'s No. 1 Roy Terry, C SW SE Section 30-16n-6w, Sherman Township, Isabella County, was plugged and abandoned as a dry hole after drilling through the Dundee and into the Monroe to a total depth of 3,785 feet. Monroe was topped

New Activity Expected in Old Lima Field; Fourteen Wells Completed in Ohio

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Dec. 1.—Indications are there will be considerable drilling activity in the Lima Field, which has been overlooked, and while the wells are not large they are well worth going after. In Henry County P. D. Snoenby brought in a well recently on the Amelia Badenhop farm, Section 5, Marion Township, which produced 30 bbls. initial. He is drilling No. 1 on the Currey heirs farm, Section 6, same township. Stoddard & Dark's No. 1 on the Harmon Panning farm, Section 4, same township, produced 15 bbls. initial, and they are drilling on the C. S. Shelly farm, Section 7, same township. In Monroe Township, same county, P. D. Snonely and others' test on the F. C. Fuhrhop farm, Section 21, is a gas well.

In Allen County, near Lima, L. J. Pease & Co., trustee, drilled in a 40-bbl. producer in No. 3 on the M. E. Roberts farm, Section 14, Bath Township, and is drilling No. 3 on the C. A. Landes farm, same section. Carman Oil Co. is drilling No. 3 on the T. J. Hadsell farm, Section 13, same township. In Salem Township, Auglaize County, Louis Zimmerman's No. 1 on his farm, in Section 27, produced only 1 bbl. initial.

In Van Wert County, Elmer Caudill and others' No. 3 on the Mary B. Sheets farm, Section 30, Jackson Township, produced 5 bbls. initial, and they are drilling No. 4 on the same farm. Hystanton Oil & Gas Co.'s No. 2 on the J. A. Reed farm, Section 30, produced 3 bbls. and No. 3 on the same farm is drilling. Elmer Caudill and others' No. 1 Charles Sterling farm, same section, produced 5 bbls. initial. Duncan & Smith are drilling on the William McCracken farm, Section 29, same township. H. C. Miller is drilling No. 4 on the James P. Davis farm, Section 5, Jennings Township, same county.

In Shelby County Eilerman Oil Co. is drilling No. 1 on the Mrs. H. G. Fisher farm, Section 24, Cynthian Township, and Arcanum Oil & Gas Co. is starting a test on the J. Eilerman farm, Section 14, same township. Charles H. Frank is drilling No. 5 on the Henry Earnst farm, Section 9, McLean Township, same county. In Wyandot County, O. A. Humbarger and others' No. 1 Lawrence Swer farm, Section 29, Tymochtee Township, produced 3 bbls. at 1,354 feet.

CENTRAL OHIO

The Central Ohio Field had 14 wells completed. In Holmes County, Norwood Oil Co.'s test on the Willard Parson farm, Section 5, Monroe County, produced 16 bbls. initial at 3,485 feet. Lydic Oil & Gas Co.'s No. 2 Ada Sprang farm, Section 12, same township, is a gas well and Ohio Fuel Gas Co.'s No. 1 Bert B. Finney farm, Section 26, produced 6 bbls. initial.

In Medina County, Kemrow Co.'s No. 2 on the Brach & Hellman farm, Section 24, Brunswick Township, produced 5 bbls. at 481 feet, and same company is drilling No. 2 on the J. H. Grutner farm, same section.

In Summitt County, East Ohio Gas Co.'s No. 4 Everett Bexler farm, Section 17, Green Township, is a gas well.

In Knox County, Ohio Fuel Gas Co.'s No. 3 George Beckley farm, Section 1, Jackson Township, is a gas well at 3,094 feet. Upham Gas Co. is drilling No. 1 Albert and Sussanah Arnholt farm, Section 12, Jefferson Township. Pure Oil Co. is drilling No. 6 Heaton farm, Section 21, Union Township. Ohio Fuel Gas Co. is drilling No. 1 Catherine DeLong farm, Section 20, Butler Township, and No. 1 H. H. Scott farm, same section.

In Muskingum County, Pure Oil Co.'s No. 13 George Crawford farm, Section 5, Jackson Township, produced 86 bbls. at 3,011 feet. Same company is drilling No. 3 E. J. Hankins farm, same township.

In Licking County, Blue Rock Oil Co.'s No. 9, Walter Hoyt farm, in Section 17, Perry Township, produced 9 bbls. initial.

In Stark County East Ohio Gas Co.'s No. 1 on the Christ Miller farm, Section 16, Plain Township, is a gas well at 4,561 feet. Same company is drilling No. 2 Mary Esselbourne farm, Section 4, same township. Brendel Producing Co. abandoned No. 4 on the William M. Miller farm, Section 4, same township, and has a rig for No. 1 S. G. Wright farm, same section.

(Continued on Page 81)

at 3,765 feet and water struck at 3,778 feet.

Although a slight show of oil was reported, ultimate failure of this test, the deep hole in Sherman Township, is expected to end deep drilling in the Broomfield-Sherman Township district at least until spring. Already an established gas producing area in the shallow Michigan Stray sands, this territory has been tested to the Dundee and Monroe by several deep tests this year. Pure Oil Co. encountered a 10 to 20-bbl. show of oil in the Dundee on its Willie lease in the Broomfield gas field but did not attempt to produce it.

Hal-Be-Oyle & Gas Corp.'s No. 1 O. D. Leiter, SE NE SW Section 33, is still uncompleted as a possible Michigan Stray sand gasser with two other projects starting in Sections 31 and 36 of Sherman Township.

Denver Township—Isabella

Three tests are nearing completion in Denver Township, Isabella County, including the Wittmer Co.'s No. 1 Mrs. Fred Haskins, NE SW SW Section 30-15n-3w, drilling at more than 80 feet in the Dundee; Morris-Van Keuren Oil & Gas Syndicate's No. 1 J. Hart, SW NW NE Section 18, drilling at more than 3,600 feet and Morris Oil & Gas Corp.'s No. 1 F. and C. Epple, SE NE SE Section 19, shut down in the Dundee.

The Wittmer-Haskins well had a light showing of oil but was carrying considerable water and was expected to be plugged back before acid treatment.

Marked interest was displayed in the No. 1 Hart, located about a mile due east of the Wittmer Co.'s new producers in Isabella Township near the village of Rosebush, the Hart being considered an extension test.

Half a dozen other tests were active in the township but no others were near production.

Isabella Township, Isabella County

The Wittmer Co.'s No. 1 Malcom McCloud, W W SE Section 12-15n-4w, Isabella Township and County, was the only one of six active tests in this area nearing possible completion this week. The McCloud was fishing at 1,059 feet, not far above the Michigan Stray sand level. Five others were just starting.

Four other tests were listed in Isabella County, one driving pipe and one on location in Rolland Township, and one completing and another drilling in Chippewa Township.

Ogemaw County

Three probable Dundee oil producers were in the process of completion in West Branch Township, Ogemaw County, while one Dundee test in Ogemaw Township was dry, plugged and abandoned in the Dundee.

W. J. Sovereign's No. 1 Ransom Swain, SW NE SE Section 19-22n-2e, West Branch, pumped 82 bbls. in four fours after topping Dundee limestone at 2,555 feet and drilling to a total of 2,723 feet. It was acid treated.

Ide Oil & Gas Corp.'s No. 1 Jane M. Donovan, NE SE NW Section 19, same township, also was estimated good for 25 bbls. natural in the Dundee topped at 2,575 feet and drilled to 2,740 feet, total depth. It will be treated with acid.

Joseph Malloy and associates' No. 1 Sarah Bosom, SE NW SE Section 19, topped the Dundee at 2,558 feet and reported a good showing of oil after drilling to a total of 2,726 feet.

McClanahan Oil Co.'s No. 1 Boutell, SW SW SW Section 5-22n-1e, Ogemaw Township and County, was dry, plugged and abandoned at a total depth of 3,405 feet.

Muskegon Oil Corp. was ready to drill in its No. 1 H. Wilson, NW SE NE Section 24, also Ogemaw Township, after topping the Dundee at 2,628 feet. Three others in West Branch Township were drilling, five starting and two locations.

Montcalm County

Tope-Blunt-Voorhees' A No. 1 on the Neff ranch, SW SW NW Section 22-11n-6w, Day Township, Montcalm County, was dry, plugged and abandoned as a "duster" in the Dundee at 3,484 feet after topping it at 3,450 feet.

Four other Montcalm County tests were active but none near completion, one in each of four different townships, Crystal, Montcalm, Pierson and Richland.

Mecosta County

Two Mecosta County tests failed to strike gas in the Michigan pay sands but are to be deepened to lower formations. They are Gordon Oil Co.'s No. 1 Engleman, SW NW Section 9, Martiny Township, and Daily Oil Co.'s No. 1 J. O. Rouen, SW SE SW Section 24, Green Township.

Taggart Brothers, Inc., No. 10 well on the Fin Johnson lease, C SE NW Section 4-14n-9w, Martiny Township, was about to be drilled into the Michigan gas sand. There were four other active tests in the county with three on location or starting. They include tests in Hinton, Morton Millbrook and Sheridan Townships.

Lapeer County

William C. Sowell's No. 2 Koehler and Wilson, SW SW SW Section 4-8n-9e, Oregon Township, Lapeer County, is estimated good for 5 bbls. a day after acid treating for a show of oil.

Two were shut down, one after being dry in the Berea, while the rig was removed from Mr. Sowell's No. 1 King ranch, SE SE SE Section 1, Oregon Township. Two other locations are listed in the county.

Wildcats

After failing to strike oil at a lower depth, Ithaca Oil & Gas Co.'s No. 1 Thum, Section 19, Elba Township, was being plugged back to Michigan gas sand at about 700 feet.

McClanahan Oil Co.'s No. 1 D. Ross & Hazel O. Sullivan, NE SW NW Section 33, Pine River Township, is nearing 2,800 feet in drilling.

Three deep tests, one in Bethany Township, Gratiot County, one in Genoa Township, Livingston County, and the other in Benton Township, Eaton County, were shut down. Eleven other wildcats were listed including several drilling wells and some new projects.

New Locations

State permits for 10 new locations and one correction were issued during the week of November 21 to 27 by the state conservation department. Half were wildcats and half in proved fields.

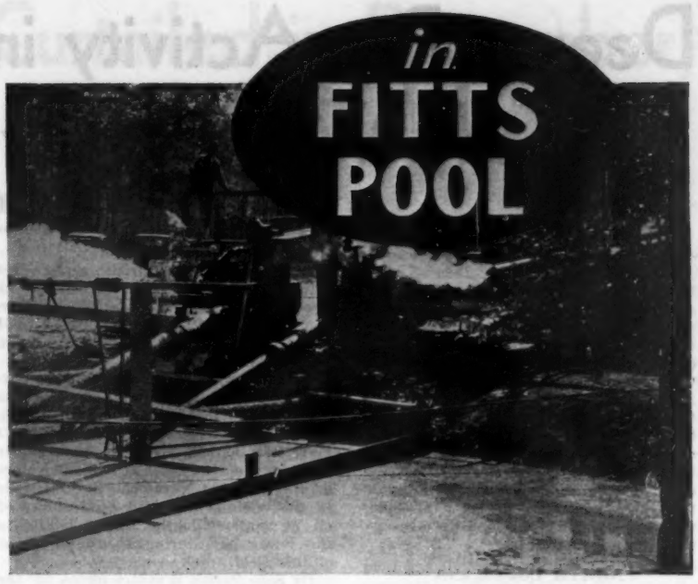
Pure Oil Co. took out two permits, one for the No. 13 Mina Narmore, SE SW SW Section 15-13n-1w, Porter Township, Midland County, and the other for the C. No. 6 Glenn M. Reem, SW NW SE Section 7-14n-2w, Greendale Township, Midland County.

Two were issued for new tests in West Branch Township, Ogemaw County, as follows: William Keur and associates' No. 1 Clarence and Gertrude Finnerty, SE NE SE Section 19-22n-2e, and M. J. Ingold's No. 1 Gustave Hobohn, Margaret and Ersa Wheeler, NE NW NW Section 29.

Permit for a new western Michigan test was issued to the Dragoon Development Co. for its No. 1 George H. Young, SW NW NW Section 15-17n-15w, Logan Township, Mason County, where some old gas and oil wells were drilled several years ago.

Five new wildcats include Lupton Oil Co., Inc.'s No. 1 G. and E. J. Rakestraw, SE SE SW Section 35-24n-3e, Rose Township, Ogemaw County; Black Diamond Syndicate's No. 1 W. J. and L. S. Vaughn, SW NW NE Section 28-24n-4w, Lyon Township, Roscommon County; P. D. Bornman's No. 1 J. C. Boldt, SW SE NW Section 28-8n-16e, Grant Township, St. Clair County; F. Irwin Bryan and Harry T. Martin's No. 1 O. A. Aldrich, NE SW SW Section 3-8n-11w, Plainfield Township, Kent County, and the Black River Oil Co.'s No. 1 Eugene Ranger, SW SE SE Section 22-28n-9e, Alcona Township and County.

The new wildcats represent north, northeast, southeast, central and western Michigan, being widely scattered.



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Deeper Pay Activity in Rainbow District, Ark.; Steady Wildcat Play in Northern Louisiana

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Dec. 3.—The Rainbow Field in the Arkansas district continues to perform in a way that may develop into a wild boom in a district that has experienced many wild booms during the discovery and development of the numerous fields in South Arkansas. Aside from the deeper pay excitement in the Rainbow Field, the Arkansas district has a number of interesting wildcats nearing the testing stage. Although temporarily overshadowed by developments in this district, the North Louisiana area continues to show a steady wildcat play, some of which are expected to show paying results.

NORTH LOUISIANA

There were six completions reported in this district, consisting of three small pumpers, one gas well and two dry holes. In the old Elm Grove area, Goldman & Sklar's No. 4 Caplis, Section 25-16-12, Bossier Parish, is pumping 15 bbls. of fluid daily, 40 per cent salt water. The total depth of the hole is 1,559 feet.

Further evidence that the Converse and Zwolle Fields in Sabine Parish are about through is the completion of two small wells, both of which made salt water with small quantities of oil. In the Converse area, Erle P. Halliburton's No. 3 A. J. Burkett, Section 9-9-13, is pumping 10 bbls. of oil and 100 bbls. of salt water from 2,044 feet, and L. D. Higgins' No. 2 A. J. Burkett, Section 16-9-13, is a 5-bbl. oil producer with 100 bbls. of salt water from 2,035 feet. The daily production in the Converse Field is about holding its own in comparison with a year ago, but the Zwolle Field to the southeast, the original chalk rock pay in this area, has dwindled to less than half of its daily average runs of a year ago. The general use of acid treatment of the chalk rock horizon in the Zwolle Field, which began in 1932, increased considerably for a period the production of completed wells as well as old pumpers, but for the past 12 months the field has shown a steady decline.

The lone small gasser from this district was reported from the shallow sand in the Blanchard Field, Caddo Parish. Texas Co.'s No. 8 Noel fee, Section 4-18-16, gauged only 250,000 feet of gas with 330 pounds rock pressure from 921 feet. A Red River Parish test, Louis L. Glass' No. 1 George Dickson, Section 32-12-8, was abandoned at 1,030 feet after the derrick was blown down. There is no record of a test on the well which has been shut down for several months. Another Converse test, Zan Lloyd's No. 1 Henderson, Section 29-9-13, failed to make a commercial producer after showing 200 feet of oil and water in the hole and was abandoned at 2,031 feet.

Wildcats

None of the wildcats in the North Louisiana district developed anything of interest during the week, but a number are being closely watched. In the northern part of Bossier Parish, Plain Dealing Syndicate's No. 1 S. H. Bolinger, Section 35-23-13, has set 10-inch surface casing at 63 feet and is drilling at 415 feet. Producers Oil & Gas Co.'s No. 1 W. H. Werner, Section 7-17-11, about 1½ miles northeast of the Sligo gas field, developed split casing at 2,850 feet while testing from a total depth of 3,990 feet. Four and one-half inch casing was set at 3,285 feet and the well is blowing an estimated 8,000,000 feet of gas with a heavy spray of salt water.

In an anticipated shallow producing district in Bossier Parish, across Red River to the east from Caddo Parish production, Leonard Co.'s No. 1 Pearson, Section 22-21-14, is drilling at 1,651 feet after testing salt water in the Nacatoch at 988 feet.

The old producing areas in Caddo Parish continue to get a play, the latest to get a shallow test is the Trees City Field. George R. Stevens and others' No. 1 Hart, Section 22-21-16, is temporarily shut down curing titles at 940 feet before drilling into the Nacatoch. Several wells in this vicinity reported good shows of oil at shallow depths while drilling to the lower pay during the development of this field.

De Soto Parish is still a mecca for the wildcatter in the North Louisiana district. Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, Section 14-12-11, developed a leaky casing while bailing to test from 2,731 feet and will set 2½-inch tubing with packer to continue testing. W. T. Coleman's No. 1 Rambin estate, Section 13-12-12, encountered a show of gas at the shallow depth of 840 feet and will set casing to test. Hester and others' No. 1 Alston, Section 11-11-16, is fishing for liner at 2,620 feet after testing dry at that depth. A deep test in Natchitoches Parish, Benedum & Trees' No. 1 Carver estate, Section 6-8-7, developed 35 fourbles of salt water on drill stem test from 4,270 feet and is coring ahead at 4,380 feet. The eight new locations staked in the North Louisiana district were all in proven or semiproven areas, no outstanding wildcat being reported.

ARKANSAS

Alice-Sydney Oil Co.'s No. 7 Gregory, Section 11-17-14, an old producer in the Rainbow Field deepened to the new pay zone, set 5-inch casing at 3,336 feet with the top of the sand encountered at 3,353 feet and the total depth at 3,362 feet. The well flowed 540 bbls. of pipe line oil through 2½-inch tubing, no choke, the first 16 hours and seems to be good for from 600 to 800 bbls. per day. The gravity of 30.2 is practically the same as the discovery well of Short & Hayes and the open casing pressure registered 125 pounds. In addition to the more than half dozen new rigs reported in that field last week, three more operations are reported for this week. Some of these are new wells from the surface, while others are old producers from the upper pay deepening to the new producing level. While it is generally conceded the recently discovered lower pay sand in the red bed series will consistently produce on the known structure, the next week's development should determine the extent of this production. Jovian Oil Co.'s No. 1 W. H. Perdue, Section 3-17-14, 1 mile north of the discovery well, should contact the new sand within the next seven days. The well showed a small amount of oil on drill stem test from 2,772-92 feet and is drilling ahead below 3,000 feet.

Deep Test in Union

A deep test in the southern part of Union County, Joe Modisette's No. 1 Union Saw Mill Co., Section 14-18-11, is making good progress drilling at 2,520 feet. An Arkansas County wildcat, Grand Prairie Realty Co.'s No. 1 Fischer, Section 6-6s-4w, reports a show of gas from 962-65 feet and arrangements are being made to make a drill stem test. In Lafayette County, Benedum & Trees' No. 2 Bodcaw Lumber Co., Section 19-16-23, has fished out 1,400 feet of drill stem and is drilling from 4,719 feet. To the southwest, in the same county, A. H. Tarver's No. 1 Russell, Section 12-17-25, is drilling at 2,035 feet.

One dry hole and one junked hole made up the list of completions in the Arkansas district. The former was C. V. Lenz' No. 5 Dale, Section 24-15-26, outside the proven lines of the Miller County Field. In Nevada County, O. F. Whittaker's No. 1 J. Wesley, Section 2-15-20, was junked at a total depth of 2,092 feet after attempting to sidetrack line pipe which parted while attempting to set for a test. The derrick will be skidded over 20 feet north over a new hole. No new operations were staked in this district outside of the one in the Rainbow Field.

Production Estimate

Estimated daily gross production all companies week ending November 30, 1934:

NORTH LOUISIANA	
Bellevue	520
Caddo Light	4,600
Caddo Heavy	1,655
Converse	1,395
Cotton Valley	565
De Soto and Red River	1,540
Elm Grove	355
Haynesville	3,735
Holly	155
Homer	2,675
Pleasant Hill	190
Sarepta-Carterville	590
Urania	3,325
Zwolle	2,775
Total	24,015
SOUTH ARKANSAS	
Champagnolle	1,925
El Dorado	2,385
Lisbon	560
Miller County	1,375
Nevada	885
Smackover Light	2,300
Smackover Heavy	18,965
Stephens	630
Urbana	2,305
Total	31,130

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
Washing to bottom 1,700 ft.

BIENVILLE PARISH

M. V. Duncan et al's No. 1 Hutton, 400 ft. S, 330 ft. E, NW cor. Sec. 4-18-7.
Set 10-in. 125 ft.

Saline Drlg. Co.'s No. 1 Pardee, Sec. 37-14-6.
Drlg. 1,810 ft.

BOSSIER PARISH

Goldman & Sklar's No. 4 Caplis, 1,527 ft. S, 1,482 ft. E, NW cor. Sec. 25-16-12.
Comp.; pumping 10 bbls., 1,559 ft.

Howard & Baird's No. 1 Gold, 150 ft. S and E, NW cor. Sec. 36-20-13.
S.D. for water 1,136 ft.

W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, SE cor. NW NW Sec. 3-21-13.
Set 10-in. 43 ft.

Plain Dealing Synd.'s No. 1 S. H. Bolinger, Sec. 35-23-15.
Drlg. 415 ft.

Producers O. & G. Co.'s No. 1 Weiner, 660 ft. N and W, SE cor. Sec. 7-17-11.
Blowing est. 8,000,00 ft. of gas 3,990 ft.

Leonard Co.'s No. 1 Pearson, 350 ft. S and E, of C Sec. 22-21-14.
Drlg. 1,651 ft.

Woodley Pet. Co.'s No. 5 Schuler, 560 ft. N, 660 ft. E, SW cor. NW Sec. 13-17-11.
Drlg. 1,910 ft.

CADDO PARISH

Ark.-La. Tex. O. & G. Co.'s No. 1 LeRosen, 990 ft. E, 330 ft. N, SW cor. NW Sec. 15-20-15.
Rigging up.

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E, 660 ft. N, SW cor. Sec. 12-22-16.
S.D. for water, 2,540 ft.

Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 15-17-14.
S.D. 1,046 ft., repairing rig.

O. L. Hickman's No. 1 fee, 1,046 ft. S, 1,700 ft. E, NW cor. Sec. 36-17-15.
Drlg. 2,618 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 2,138 ft.

M. Rodgers' No. 4 Muslow, 1,495 ft. S, 1,270 ft. W, C Sec. 4-20-15.
Drlg. 750 ft.

G. R. Stevens' No. 1 Hart, 300 ft. N and E, SW cor. E½ SW Sec. 22-21-16.
S.D. 940 ft.

Shreveport Oil Corp.'s No. 2-C Muslow, 1,106 ft. E, 280 ft. N, SW cor. NW Sec. 4-20-15.
Set 10-in. 100 ft.; drlg. 1,400 ft.

Shreveport Oil Corp.'s No. 3-B Muslow, 742 ft. E. 710 ft. S. NW cor. Sec. 4-20-15.
Set 6⅝-in. 2,158 ft.

Leonard Co.'s No. 1 Green, 150 ft. N and E, SW cor. NE SW Sec. 3-20-15.
Set 10-in. 40 ft.

Leonard Co.'s No. 4 S. P. Harrell, 220 ft. N and W, SE cor. NW SW Sec. 2-21-16
Set 6⅝-in. 1,044 ft.

CATAHOULA PARISH

T. R. Hincy's No. 1 La. Central Lbr. Co., Sec. 32-9-6e.
S.D. for D.S. 1,541 ft.

DE SOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 28-11-13.
Drlg. 300 ft.

Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
Csg. leaking; set 2-in. tubing 2,731 ft.

Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. 1,760 ft.

W. T. Coleman's No. 1 Rambin Est., 300 ft. S and E, NW cor. SW SE Sec. 13-12-12.
Arranging to test 840 ft.

Dempsey & Manziel's No. 1 Thigpen, 375 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13.
Drlg. plug to treat with acid, 1,730 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
S.D. 2,175 ft.

E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
R.U. to deepen 1,502 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
Fishing 2,520 ft.

George Le Grande's No. 1 Vance, 180 ft. N and W SE cor. SW Sec. 34-12-16.
S.D. for csg. 2,030 ft.

Ben F. Smith's No. 1 Bonds, 200 ft. E, 500 ft. N, SW cor. Sec. 23-12-11.
Drlg. 2,240 ft.

W. K. Williams' No. 1 Wemple, 660 ft. N, 330 ft. W, SE cor. Sec. 15-12-11.
Drlg. 2,100 ft.

LA SALLE PARISH

F. A. Trichello's No. 1 Urania, Sec. 3-9-1e.
Coring 1,430 ft.

MOREHOUSE PARISH

Zeiger & Bacon's No. 1 Crossett, 400 ft. N, 300 ft. W, SE cor. Sec. 41-23-6e.
T.A. 3,111 ft.

NATCHITOCHES PARISH

Benedum & Trees' No. 1 Carrier Est., 300 ft. N and W, SE cor. Sec. 6-8-7.
Coring 4,380 ft.

Clyde Crichton's No. 1 Friedman Est., 466 ft. N, 428 ft. E, SW cor. Sec. 52-7-6.
S.D. for wtr., 1,045 ft.

Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-12.
P.B. to 2,420 ft.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,033 ft.

Roy A. Raines et al's No. 1 Raines est., 330 ft. N and E, SW cor. Sec. 8-9-10.
S.D. for water 2,606 ft.

OUACHITA PARISH

Hamilton Gas Co.'s No. 1 Parker, 557 ft. S. 473 ft. W. NE cor. Sec. 2-19-3e.
Set 6-in. 2,121 ft.

Inabent & Piper's No. 1 D'Arbone, 660 ft. N and E, SW cor. Sec. 23-19-3e.
Set 12½-in. 100 ft.

James A. Noe's No. 1 fee, 253 ft. N, 55 ft. W, C Sec. 2-18-3e.
Set 12½-in. 182 ft.; set 8-in. 740 ft.; drlg. 1,900 ft.

RAPIDES PARISH

Evars & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e.
Dry and abd. 2,130 ft.

C. D. Lee, trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Rigging up.

RED RIVER PARISH

Louis L. Glass' No. 1 Dickson, 400 ft. S and W, NE cor. SE Sec. 32-12-8.
Derrick down; hole abd. 1,030 ft.

C. M. Cope et al's No. 1 Thomas, 330 ft. S and E, C Sec. 34-13-1.
S.D. 2,375 ft.

(Continued on Page 84)

Buckeye Grade Crude Curtailed in December; Southeast Ohio Area Has Best Completion

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Dec. 3.—Due to curtailed markets for Buckeye Penna Grade crude produced in Southeast Ohio, the South Penn Oil Co., the major purchaser of Penna Grade crude, advised all producers, with whom contracts exist for all oil as run, that it is now necessary for less oil to be run. The notice reads:

"Our company has notice that its outlet for Buckeye Grade crude oil will be curtailed throughout the month of December, 1934, to 80 per cent of the amount customarily taken. It would appear that this curtailment is liable to continue throughout the month of January, 1935, but we are hoping that it may be of a very temporary nature and are making every effort to bring our outlet back to normal.

"We hold 'standing purchase orders' from all our Buckeye crude customers and dislike very much to cancel and return these orders, but unless the production is immediately curtailed in keeping with our outlet as stated above, we will be compelled in each case to cancel our buying arrangement. We greatly regret having to take action of this kind and can only assure you that all customers will receive the same treatment.

"Should you continue the present relations with us we will notify you in good time of the amount of oil that can be marketed in January and succeeding months."

This action was unlooked for at this time although it has been known for some time that the refinery demand for crude has slackened due to softness in the refined prices. Buckeye Grade Pennsylvania crude is handled as a separate oil due mainly to the price differential and the necessity of a different filtering process. This particular grade of crude is not in general use in all of the Pennsylvania Grade refineries. As had been proven during the general curtailment of production which ended July, 1933, the price structure of the Pennsylvania Grade crudes can best be maintained by limiting the allowable to satisfy the refinery demand and so prevent the accumulation of large stocks.

There were 22 completions and two dry holes in the lower eastern fields during the past week. Ten were gas wells and 12 producers with an initial production of 224 bbls. There were some fair completions and reports of additional work in all fields.

SOUTHEAST OHIO

The largest producer was in Coshocton County, Southeast Ohio. In NW Section 25, Pike Township, Pure Oil Co. completed No. 13 on the G. W. Crawford farm in the Clinton sand at a depth of 2,995 feet. It produced 30 bbls. the first day, natural, which increased to 89 bbls. a day after shot.

In Holmes County, Norwood Oil Co. drilled deeper the old gas well, No. 2 on the W. R. Parsons farm, Lot 5, Monroe Township, 65 feet deeper in the Clinton sand to 3,497 feet. It was shot and is producing about 15 bbls. of oil a day.

In Licking County, Blue Rock Oil & Gas Co. completed No. 9 on the Walter Hoyt farm, Section 17, Perry Township, in the Berea sand at a depth of 754 feet. It produced 11 bbls. the first day after shot, and will make about a 3-bbl. pumper.

In Medina County there were three completions. In Tract 14, Lot 6, Chatham Township, Oko Oil & Gas Co. completed No. 30 on the S. W. Brinker farm in the Berea grit at 325 feet. It produced 15 bbls. the first day after shot. In Lot 55, same township, Hubert and Allis completed a test on the Charles L. and Westa Allis farm in the same formation at a depth of 537 feet. It produced 4 bbls. the first day after shot. In Section 13 of this township, Harold L. Pearsall completed No. 7 on the W. M. Clifford farm at a depth of 452 feet, the Berea grit, and it produced 2 bbls. the first day after shot.

In Perry County Mid-East Gas Co. and others completed a test on the L. B. Beard farm, SE Section 11, Reading Township, in the Clinton sand at a depth of 3,119 feet. It produced 25 bbls. the first day, natural, and will be shot.

In Washington County, Otto Heldman and others completed a test on the Viola Q. Adams farm on Wingett Run, Section 54, Ludlow Township. It was drilled in the Injun sand to 1,410 feet and is a gas well gauging about 330,000 feet a day. On Archers Fork in Section 4, Lawrence Township, John T. Hall and others completed drilling No. 3 on the Wallace Hamilton farm through the Third Salt sand streak to 1,320 feet. It was dry.

WEST VIRGINIA

The most important section of West Virginia is in Elk district, Kanawha County, where several wells are drilling to the Oriskany sand, a depth of about 4,500 feet. In this district the Benedum & Trees interests have made a location and are hauling in timbers on the Mary C. Wingfield farm on the same side of the river as the station and 1,700 feet northeast of it. The location is about 600 feet from the Elk River between the B.&O.R.R. and the hard road, and exactly 125 feet from the railroad and 100 feet from the hard road and 250 feet from the Robert Bibby farm line. This location would appear down structure.

In this district the following wells are drilling, presumably to the Oriskany sand: S. B. Avis, trustee for Grosscup and others, has reached 2,170 feet on the W. T. Copen heirs farm. V. C. Smith and others are down 500 feet on the Matheney, Wertz and others Island at the mouth of Coopers Creek. Lincoln Gas Co. is drilling at 600 feet on the Whittaker tract. Clyde Oil Co. has rigged up on the F. W. Shinn farm. On the W. T. and J. H. Goshorn farm, Yoak Brothers Oil & Gas Co. are the operators instead of Goshorn and others as reported. This company is comprised of Howard Eister of Charleston, and W. J. Yoak and O. L. Yoak of Clendenin. The rig has been completed for this test.

Producers

There were four producers completed in West Virginia. In Calhoun County Richter Oil Co. completed No. 8 on the B. S. Raybuck farm in Sheridan district in the Salt sand at a depth of 2,002 feet. It is producing about 15 bbls. a day. In Lee district, Jarvis and Ayers completed a test on the Jarvis-Hamilton lease in the Injun sand at a depth of 2,072 feet and it is producing about 2 bbls. a day along with about 184,000 feet of gas.

In Ritchie County, northeast of the Pike Pool and near Molehill, Batchelor, Coghill, Ray, Inc., completed No. 9 on the J. L. McCullough farm in the Maxon sand at a depth of 1,935 feet. It is showing for a 35-bbl. producer. In the same district, Glen McBurney and others completed a second test on the G. H. Darnell farm in the Maxon sand at 1,930 feet and have a 15-bbl. producer.

Gas Wells

In Boone County there were two completions. In Crook district Pure Oil Co. completed a second test on the Pocatello Coal Co. tract in the Weir sand at a depth of 2,962 feet. In is a small gas well, natural. In Sherman district, Hope Construction & Refining Co. completed No. 54 on the Federal Coal Co. tract in the same formation at a depth of 3,463 feet. It is showing for 160,000 feet of gas a day.

In Cabell County there was a fair completion. John Kingery and others completed a test on the Rosa Midkiff farm in the Big Injun sand at a depth of 1,590 feet and it has a volume of slightly over 1,000,000 feet a day.

In Gilmer County, McCall Drilling Co. completed a test on the G. W. Wigner and others lease in DeKalb district in the stray below the Fifth sand, a depth of 2,652 feet. It is a light gas well.

In Roane County, United Fuel Gas Co. completed No. 4,536 on the T. Ferrell farm in Smithfield district in the Injun sand at 2,052 feet. It has 106,000 feet a day. In Spencer district, O. G. Epling completed a test on the L. P. Starr farm in the same formation at a depth of 2,216 feet. It gauges less than 100,000 feet a day.

In Ritchie County, L. P. Bickel drilled No. 3 on the Morris Brothers lease in Murphy district, a small gas well in the Injun sand at 1,837 feet, down to the Berea shells at 2,282 feet. There is a showing of oil in this formation and it is being tested. On Sheep Run in Grant district Cairo Oil Co. drilled a test on the F. H. Markey farm through the Injun sand and it is dry.

In Wirt County, R. C. Waggoner and others completed a test on the James W. Ferree farm in Burning Springs district in the Injun and Keener sand a total depth of 2,022 feet. It is a fair gas well showing 500,000 feet a day, natural, and 1,500,000 feet after shot.

Drilling in West Virginia

In Boone County Pure Oil Co. has made a location for No. 3 on the A. M. Prichard lease in Sherman district. On the Federal Coal Co. lease, this company has reached depths of 1,982 feet and 1,102 feet in Nos. 70 and 71. The Owens Illinois Glass Co. is down 1,899 feet on the Peytonia Coal Land Co. farm, same district.

In Cabell County, H. H. Baker Gas Co. is spudding on the George H. Midkiff farm in McComas district. Here Fairfax Gas Co. has rigged up on the Leonard Paugh farm. R. H. Adkins and others are down 1,450 feet on the F. F. Starcher farm and on the James Mills farm, Carney Gas Co. is down at 1,360 feet pulling casing.

In Calhoun County Henderson Oil Co. has started drilling on the Parsons heirs farm in Washington district. Other operations in this district include Litton Gas

(Continued on Page 81)

Royalite Oil Company Will Start Test in Turner Valley Offsetting Model Oils

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Dec. 1.—After a long period of drilling inactivity, Royalite Oil Co. has spotted its No. 26 test in North Turner Valley in LSD 5, Section 23-20-3w5. It is a direct easterly offset to Model Oils' No. 1 in LSD 8, Section 22-20-3w5. Model's No. 1, completed several years ago, is on the west side of the North Turner Valley structure, and has been a steady producer from the Madison lime. Its production is a light crude oil instead of naphtha, which is encountered in practically all the Turner Valley wells in the deep lime horizon, and it has only a small amount of wet gas. Production of Model's No. 1, approximating 100 bbls. a day or better, has been taken by Imperial Oil Refineries, Ltd., till recently, when it was contracted to the Bell Refining Co. of Calgary. Royalite's No. 26 will start work at once, rotary equipment being utilized. The Royalite company owns the whole of Section 23, as well as Section 14, immediately to the south. The only producing wells in North Turner Valley besides Model's No. 1 are Model's No. 2, LSD 16, Section 22-20-3w5, and Foothills Oil & Gas Co.'s No. 1, Section 27-20-3w5, both north of Model's No. 1.

Royalite Extends Control

With the acquisition recently of the wells of the Home Oil Co. in Section 20-19-2w5, Royalite Oil Co. now owns approximately 40 per cent of the Turner Valley production. It owns a much higher percentage of the Turner Valley wells, but most of its producers are in the more or less depleted central and north central sections. The independent companies, with prolific wells in the extreme south, contribute to a considerable extent to the production total. The lare independent producers include Highwood-Sarcee's No. 1, Sterling Royalties' No. 1, Century Royalties' No. 1, Becker Syndicate's No. 2 Anaconda, Merland Oil Co.'s No. 1, and the Mar Jon, Mercury, and Miracle wells.

Royalite Oil Co. is adopting a policy of conserving wet gas in areas too intensively developed in the boom years with the result of lower pressure. Royalite's Nos. 16, 20 and 22 are being plugged in the naphtha horizon. Royalite's No. 4, the first to get wet gas in the limestone, was abandoned some weeks ago.

Apart from Royalite's No. 26, the Royalite company is not planning any early drilling, and no new work is contemplated in the southern extension. Northwest Co., a subsidiary of Imperial Oil, Ltd., recently completed its No. 1 Longview on the east side of South Turner Valley. This was the only drilling in more than a year in which Imperial Oil, Ltd., was interested.

Central Turner Valley

In the Central Turner Valley, New McDougall-Segur Oil Co.'s No. 7, Section 12-20-3w5, is on test at 3,700 feet and looks like a small light crude producer. McLeod Oil Co.'s No. 3, LSD 16, Section 1-20-3w5, has been plugged in the Madison lime but will take light crude production from the upper horizons.

In Section 28-18-2w5, Director Roy-

(Continued on Page 81)

Completions in Kansas Were Few, But One Was a 7,000-Bbl. Well; Opening of a New Pool

By JAMES McINTYRE

The number of completions and near completions in Kansas in the past week in review was smaller than usual, but some good sized wells were included among them and one of the wells did better than 7,000 bbls. initially.

Late report shows Olson Oil Co. and Shell Petroleum Corp.'s No. 2 Downie, C SW SE NE Section 14-23-4w, Haury-Burrton Pool, Reno County, producing 1,617 bbls. in a potential test from Hunton lime at 3,618-22½ feet, and Amerada Petroleum Corp.'s No. 1 Wilson, C SE SW SW Section 23-23-4w, pumping and flowing 1,929 bbls. in 24 hours from Hunton at 3,604-10½ feet, total depth.

The biggest well of the week, mentioned in more detail below, was drilled by the National Union Oil Co., in Reno County.

Twin Drilling Co.'s wildcat in Ellsworth County, which opened a pool in the SW NW SW Section 13-17-9w, was reported in a late bulletin to have swabbed five hours during which time 250 bbls. of oil was recovered. The hole was full of oil when swabbing was begun and the fluid level was lowered only 1,500 feet in the five hours. Two offset locations have been made to the test.

Estimated Production

Estimated daily average production of Kansas for the week ending December 1 and for the preceding week follows:

	Barrels	
	Dec. 1	Nov. 24
Hollow	5,750	6,300
Ritz-Canton	10,275	10,175
Voshell	4,750	5,450
Johnson	1,310	1,818
Sedgwick County	7,350	7,500
Nikkell	5,125	5,250
Ellsworth	3,229	3,272
Barton County	350	1,090
Rice County	14,870	13,766
Reno County	13,600	9,412
Ellis County	350	480
Kingman County	1,070	1,405
Stafford County	1,950	1,862
Russell County	8,685	7,193
Greenwood County	11,250	11,250
Butler County	18,900	18,900
Other pools	18,486	17,727
Total Kansas	127,300	122,900

Reno County

Barnsdall Oil Co.'s No. 2 Sabin, SW NW SE Section 11-23-4w, Burrton Pool, Reno County, tested 1,389 bbls. in 22 hours, producing from Siliceous lime at 2,775-84 feet, total depth, which had been acidized. The owner will plug back to Hunton and test that formation which cored saturation 3,552-90 feet. Operators in the field, it is said, prefer to develop the upper pays before going down to test out the Siliceous lime, in which so far the oil has proved to be of lower gravity than in the upper pays, Chat and Hunton lime. The Barnsdall Oil Co. had moved in material for No. 5 Sabin, SW SW SE Section 11, and is drilling below 600 feet in No. 4 Sabin, NW SW SE Section 11, and rig is up for No. 3 Sabin, NE NE SE Section 11.

Skelly Oil Co. has cellar dug for No. 4 Sabin, SE SE SW Section 11-23-4w.

Tide Water Oil Co.'s No. 1 Montford, NW NW SW Section 12-23-4w, had Hunton lime at 3,618-22½ feet, total depth, and it swabbed 185 bbls. in four hours. It was then acidized.

National Union Oil Co.'s No. 2 Ackley, NW NE SE Section 14-23-4w, was completed. It was acidized in Hunton lime at 3,591-98 feet and flowed 7,170 bbls. in 24 hours. Location was made for No. 3 Ackley, NE NE SE Section 14.

Olson Oil Co. and Shell Petroleum Corp.'s No. 2 Downie, SW SE NE Section 14-23-4w, had material on the ground, and rig is up for Marathon Oil Co.'s No. 1 Vansickel, NE NE NW Section 23-23-4w.

Olson Oil Co. and Shell Petroleum Corp.'s No. 2 Duckworth, C NE NE Section 23-23-4w, was completed as a gas well, good for 18,000,000 feet, from chat at 3,253-3,325 feet.

Study, Frost, Curry and others' No. 3 Martin, NE SE SE Section 19-22-3w, old total depth 3,479 feet, was deepened to Wilcox sand at 3,605-29 feet, where there was a small showing of salt water, and was then plugged back to 3,390 feet.

Rice County

Wright & Day's No. 1 Gregg, SE SE NW Section 27-21-7w, Rice County, was abandoned after Siliceous lime opened a hole full of water at 3,848-52 feet.

Slick, Pryor & Lockhart, Inc.'s No. 6 Schurr, SW NW SW Section 21-20-10w, Raymond Pool, was completed. It produced 370 bbls. of oil and 200 bbls. of water in 24 hours from Siliceous lime at 3,295-3,300 feet, which has not been acidized.

Shell Petroleum Corp. and others' No. 2 Ploog, 1,320 feet north and 440 feet west of SE cor. Section 33-18-9w, Ploog Pool, pumped 285 bbls. of oil and 23 bbls. of water in 24 hours from Siliceous lime at 3,270-72 feet, total depth. It may be acidized.

Sinclair Prairie Oil Co. made a location for No. 4 Volkland, SE SW SE Section 20-19-9w, in the Beyers Pool, and Magnolia Petroleum Co. made a location for No. 2 Beyers, SW SW NW Section 21-10-9w.

McPherson County

Shell Petroleum Corp.'s No. 9 Meyers B, 1,320 feet from west line and 330 feet from south line SE Section 14-19-2w, Ritz-Canton Pool, McPherson County, was completed in Viola lime at 3,363-68 feet. It had been acidized and made 62 bbls. of oil and 3 bbls. of water in 24 hours on the pump.

Marathon Oil Co. had material in for No. 2 Chindberg, SW SE SE Section 13-19-3w, northeast of McPherson.

Ellsworth County

In the Breford Pool, Ellsworth County, Slick, Pryor & Lockhart's No. 2 Breford, SE SW NW Section 7-17-10w, pumped 378 bbls. in 24 hours from Siliceous lime at 3,352-83 feet, total depth, but it was not completed.

Ainsworth Brothers' wildcat test, No. 1 Charvat, NE NW NE Section 33-15-10w, was abandoned when Siliceous lime at 3,318-23 feet filled the hole with water.

Twin Drilling Co. had not yet tested its No. 1 Rolfe, SW NW SW Section 13-17-9w, a wildcat, which stood with the hole full of oil from Siliceous lime at 3,201-05 feet, total depth.

Atlantic Oil Producing Co. made a location for No. 1 Rolfs, SE NE SE Section 14-17-9w, a west offset to the Twin Drilling Co.'s well, and the Texas Co. made a location for No. 1 Rolfs in the NW SW SW of Section 13, a south offset to the new oil well.

Russell County

Another Russell County wildcat test will be Wolf Creek Oil Co.'s No. 1 Donovan, SW SW SE Section 10-15-15w. The rig is on the ground.

Empire Oil & Refining Co. completed No. 2 Bender, SW SE SE Section 23-15-14w, a 225-bbl. well, in Siliceous lime at 3,349-54 feet, total depth, which had been acidized.

Central Petroleum Co.'s No. 1 Dortland C, NE NE NW Section 4-14-15w, is a 150-bbl. completion producing from Oswald lime at 3,029-75 feet.

Texas Co.'s No. 1 Neidenthal, NE SE NE Section 23-14-15w, had Siliceous lime at 3,244-55 feet, total depth, and the hole filled 2,500 feet with oil. It was swabbed down in three days, producing 90 bbls. of oil in that time.

H. H. Blair's No. 1 Fink, SW NW SE Section 16-14-14w, pumped 320 bbls. after Oswald lime topped at 3,070 feet had been acidized. It is not a completion.

E. W. Carey and others have cellar dug for No. 1 Reed, NW NW SW Section 34-13-14w.

Cowley County

Lewis Production Co.'s No. 2 Roberts, SE NE SW Section 12-32-4, Cowley County, was dry and abandoned at 2,600 feet. It had a showing of oil, gas and water at 2,586 feet.

Sedgwick County

D. R. Lauck and others abandoned No. 1 Roy, NE NE SW Section 24-29-1w, at 3,858 feet. Siliceous lime at 3,833-58 feet was barren and the test had a hole full of water from Simpson at 3,810-15 feet.

Dickey Oil Co. completed No. 1 Cook, NE SE NW Section 20-28-1e. It produced 1,031 bbls. in 24 hours following an acid treatment in Chat at 3,071-3,112 feet, total depth.

Syndicate Oil & Gas Co. and others' wildcat, No. 1 Ratzlaff, NE NW NW Section 30-26-2, flowed 5 bbls. of oil in two hours from sand at 2,975-78 feet. Six-inch pipe will be run to 2,950 feet and the well tested.

In the Valley Center Pool, Ted Spencer's No. 1 Underwood, NW cor. Section 26-25-1w, was completed. It is a 39-bbl. pumper, with 50 bbls. per day of water, from Kansas City lime at 2,675-2,776 feet, acidized.

Kingman County

Magnolia Petroleum Co. made a location for No. 1 Bartholomew, SE SE SW Section 30-27-4w, Kingman County.

Pratt County

Atlantic Oil Producing Co. made a location for No. 1 Prentice, C SE NW Section 18-28-14w, Pratt County.

Butler County

Blair and others made a location for No. 1 Blair, SW SE SW Section 22-29-6, Butler County.

Wildcat Operations in Kansas

Week Ending December 1

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Lario O. & G. Co.'s No. 1 Whelan, C NW Sec. 32-31-11w.
Chat 4,355-4,435 ft.; P.B. to 4,382 ft.; pumped 100 bbls. oil, 100 bbls. wtr.

Sam Jarvis et al's No. 1 Morrisse, C SE NE Sec. 23-30-10w.
Rig.

BARTON COUNTY

D. I. Hall et al's No. 1 Arnold, SE SE SW Sec. 19-18-15w.
Rig.

Murphin and Davis' No. 1 Lanterman, NW SE Sec. 15-19-11w.
T.D. 2,650 ft.; running 8-in. csg.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-13w.
T.D. 360 ft.; fishing.

Treleaven & Brimm et al's No. 1 Haas, SW cor. Sec. 30-18-15w.
Drlg. 2,020 ft.

Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w.
S.D. 800 ft.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE NE SE Sec. 19-29-4.
T.D. 1,950 ft.; 150 ft. fluid in hole.

Seibel, Great Basin Oil Co. et al's No. 1-A McKinley, NE SE Sec. 19-29-4.
K.C. lime 1,888-1,915 ft.; will acidize.

F. H. Unruh et al's No. 1-A Joseph, SE SW NW Sec. 18-25-4e.
Rig.

CLAY COUNTY

Seidel Bros.' No. 1 Younken, C S½ SE NW Sec. 21-9-4.
T.D. 1,391 ft.; U.R. 8-in. csg.

Severs et al's No. 1 Meyers, NE NW NW Sec. 4-10-4.
Mississippi lime 1,776 ft.; T.D. 1,834 ft.

COWLEY COUNTY

Ben Gralapp's No. 1 Kukuk, SW SW NW Sec. 6-33-4.
Drlg. 1,360 ft.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6.
Spudded and S.D.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
Set 8-in. csg. 2,500 ft.; C.O.

ELK COUNTY

Lassen's No. 1 Ferguson, SE SE SW Sec. 21-30-8.
Drlg. 1,700 ft.

ELLSWORTH COUNTY

Ainsworth Bros.' No. 1 Charvat, NE NW NE Sec. 33-15-10w.
Dry and abd. 3,322 ft.

Twin Drlg. Co. et al's No. 1 Rolfs, SW NW SW Sec. 13-17-9w.
3,100 ft. oil in hole; Siliceous lime 3,200-05 ft.; hole full oil.

GREENWOOD COUNTY

Greeley et al's No. 1 Satler, SW SE SW Sec. 28-25-12.
S.D. 325 ft.

Kite et al's No. 1 Jamison, SW SE NE Sec. 30-26-13.
Drlg. 525 ft.

Texas Co.'s No. 1 Edwards, NE NW NE Sec. 33-24-12.
T.D. 1,100 ft.; fishing.

HARVEY COUNTY

O. J. Connell et al's No. 1 Roth, SW cor. Sec. 16-22-2w.
Spudded and S.D.

Imo O. & G. Co. et al's No. 1 Sperling, SE NE NE Sec. 23-22-2.
T.D. 2,470 ft.; U.R. 8-in. csg.; H.F.W. 2,440-55 ft.

Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-2w.
T.D. 587 ft.; S.D. for csg.

KINGMAN COUNTY

Magnolia Pet. Co.'s No. 1 Bartholomew, SE SE SW Sec. 30-27-4w.
Location.

McPHERSON COUNTY

C. W. Lamer et al's No. 1 Rolander, NE NE NW Sec. 8-18-2w.
T.D. 2,515 ft; U.R. 8-in. csg.

Roth-Farout et al's No. 1 Bestwater, SE SW SE Sec. 22-20-1w.
T.D. 2,900 ft.; U.R. 8-in. csg.

NESS COUNTY

Texas Co. and Gypsy Oil Co.'s No. 1 Goodman, C SW SW Sec. 21-19-23w.
Drlg. 2,380 ft.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15.
Spudded and S.D.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-10-14w.
Drlg. 3,457 ft.

PRATT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Prentice, C SE NW Sec. 18-28-14w.
Location.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
S.D. 625 ft.

Johnson & Carey et al's No. 1 Dyck, SE NE SE Sec. 35-22-5w.
Location.

McBride et al's No. 1 Popp, SW SW NE Sec. 32-24-4w.
6-in. 3,787 ft.; base of Hunton 3,793 ft.; drlg. 3,820 ft.

Privett Drlg. Co.'s No. 1 Crotts, NE NW NE Sec. 27-26-10w.
S.D. at 2,904 ft.

RICE COUNTY

Foraker, Nickerson et al's No. 1 Lyon, SE NW Sec. 27-20-8w.
S.D. 1,960 ft.

Gypsy Oil Co.'s No. 1 Dotson, SW SW NW Sec. 25-20-10w.
Set 8-in. csg. 120 ft.

Johnson & Carey et al's No. 1 Dyck, SE NE SE Sec. 35-22-5w.
Moving in material.

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Fitts Pool Will Have Larger Pipe Line Outlet; Magnolia Gets Big Well in South St. Louis

By JAMES McINTYRE

State Umpire Armstrong notified the owners of 75 wells in the Wilcox sand zone in the Oklahoma City Field that unless they completed four-hour production tests on the wells by December 15 the properties would be shut in. Wells which had an official gauge in September and October will not be affected by the ruling. Wells in the Simpson zone completed their open flow tests Saturday, and it is estimated the total production was a trifle under the allowable of 31,040 bbls.

Western States Oil Co. has purchased a three-eighths interest in the Stauffer Petroleum Co.'s No. 1 Weinig in Section 15-11-3w, Oklahoma City Field, and has also made a deal with the Springrose Drilling Co. for a test on the Haddock land, in Block 16, Carney Heights Addition, Oklahoma City, the location of the test being NW SE NE Section 22-11-3w, formerly reported as Banner Production Co.'s proposed test. Rig is on the location.

Skelly Oil Co., in its No. 3 Wesley Moore, SE cor. NW Section 17-2s-2w, Carter County, has a good well in a broken sand series from 1,556 to 2,697 feet. It flowed 540 bbls. in 15 hours and was then shut down for tankage.

In the South St. Louis Field, Magnolia Petroleum Co.'s No. 2 Jordan, NW NE SW Section 12-7-4, produced 4,715 bbls. initially from Hunton lime at 3,804-4,010 feet.

New Line into Fitts Pool

The Stanolind Pipe Line Co. will lay a 40-mile, 8-inch pipe line from the Fitts Pool in southern Pontotoc County to Pauls Valley in Garvin County, where it will connect with the company's main line which extends from Texas City, Tex., on the Houston Ship Channel to Chicago. The company already has a 4-inch line serving the Fitts Field but the production is growing so large it was found feasible to put in a line that would care for all the oil the pool may be permitted to produce.

Field's Sixth Birthday

The Oklahoma City Field had its sixth birthday on Tuesday, December 4. It has produced over 240,000,000 bbls. of recorded oil thus far, and is still capable of producing over 200,000 bbls. per day. The quantity of "hot oil" taken from the field and not recorded in the above figures is variously estimated up to 10,000,000 bbls.

One well of Oils, Inc., is credited with a production of 1,358,972 bbls. in four years. It is still good for 100 bbls. in a four-hour test on gas lift, and is making only 1½ per cent water. A considerable number of wells are in the 900,000-bbl. class in total production and one 160-acre lease is credited with over 17,000,000 bbls. production from 40 wells, 36 of which were drilled to the Wilcox sand. Eleven wells in the Simpson sand on the Indian Territory Illuminating Oil Co.'s Trosper Park property have produced nearly 2,400,000 bbls. Same company's No. 1 Fuzzell, an Arbuckle lime producer, has poured out 1,223,613 bbls. up to the last production tabulation.

Harper County

Sinclair Prairie Oil Co.'s deep test in Harper County has been abandoned at 7,378 feet. It topped Mississippi lime at 7,030 feet. It had had no oil or gas showings.

Osage County

Completions in Osage County in the past week included the following wells, with their initial production:

City of Pawhuska's No. 24, SW SE NE Section 36-26-8, old well deepened, Oswego sand at 1,935 feet, Burgess sand at 2,288 feet, total depth 2,305 feet, show of oil and water, dry and abandoned.

Manahan Drilling Co. and others' No. 5 Ducotey, SE NW NW Section 3-25-6, shot with 100 quarts at 2,835-89 feet, swabbed and flowed 568 bbls.

A. H. Kasishke's No. 2 Swanson, SE NE NW Section 21-25-6, shot with 12 quarts at 2,825-33 feet, 125 bbls.

Sinclair Prairie Oil Co.'s No. 4 Burbank "S," NE NE NW Section 22-25-6, shot with 60 quarts at 2,728-73 feet, 75 bbls.

Johnson Oil & Refining Co.'s No. 4, SE SW NW SE Section 30-21-9, sand at 313-36 feet, shot with 90 quarts, 157 bbls. of oil and 100 bbls. of water.

W. C. Norris' No. 5, 100 feet south and east of C Section 20-21-11, Bartlesville sand at 1,934-37 feet, 150 bbls. naturally.

New work included Sinclair Prairie Oil Co.'s No. 2, NE SE NE Section 16-25-6, moving in material; J. S. Cosden's No. 1, SE SE SW Section 34-24-8, a location; E. O. Platter and Indian Territory Illuminating Oil Co.'s No. 4, NE NE SE NW Section 30-22-9, location; W. C. Norris' No. 6, SE SW NE SE Section 29-21-11, pits.

Champlin Refining Co.'s No. 2 Fletcher, NE NE SE Section 4-25-6, was plugged back to 2,848 feet after it had swabbed 2 per cent water in a 145-bbl. swabbing test. The sand had been shot at 2,832-46 feet.

Noble County

In the Polo Pool, Noble County, the Stanolind Oil & Gas Co. made a location for No. 3 DeVore, SE SW NW Section 27-22-2w. Stanolind Oil & Gas Co. and others made a location for No. 3 DeBord, SW NW SW Section 27-22-2w. Twin State Oil Co. was digging cellar for No. 2 DeVore, SE NW NW Section 28-22-2w.

Stanolind Oil & Gas Co. made a location for No. 5 Voss, SE NE SE Section 28-22-2w (corrected).

No completions or near completions were recorded in Noble County.

Logan County

Gypsy Oil Co. and Sinclair Prairie Oil Co.'s No. 1 Manning, a wildcat, C NW NW Section 3-17-4w, Logan County, was completed. It is an 18,000,000-foot gas well in Layton sand at 4,863-70 feet, after having been plugged back from 6,416 feet. It was dry in both Wilcox sands.

Eason Oil Co.'s No. 1 Herren, C N half NE NE Section 4-16-4w, Crescent Field, flowed 310 bbls. of oil. Later it bailed fresh water. Water backed up in the sand when the well was washed. It produces from Wilcox sand at 6,266-90 feet.

Estimated Production

Estimated production by pools in Oklahoma for the week ending December 1 and for the preceding week follows:

	Barrels	
	Dec. 1	Nov. 24
Allen	7,350	7,525
Asher-West Asher	1,525	1,575
Burbank	9,100	9,100
South Burbank	9,500	9,500
Balance of Osage	25,000	25,000
Blackwell	4,800	4,750
Bristow-Slick	10,250	10,250
Crescent	3,800	3,675
Cromwell	4,400	4,400
Cushing-Shamrock	13,500	13,500
Chandler district	6,000	5,750
Duncan district	4,400	4,300
Fish	4,150	4,175
Fitts	1,925	2,175
Gray	2,000	2,150
Graham	3,600	3,600
Healdton	9,250	9,200
Hewitt	5,000	4,750
Holdenville	2,375	2,475
Keokuk	1,375	1,775
Konawa	1,900	2,000
Lucien	8,675	8,650
Marshall-Lovell	1,100	1,100
Oklahoma City	158,350	136,525
Papoose	1,250	1,250
Sasakwa and Townsite	2,350	2,375
Sholem-Alechem	4,150	4,100
Seminole Field:		
Bowlegs	9,225	10,825
Carr City	4,075	5,050
Earlsboro	8,050	8,550
East Earlsboro	7,275	8,100
South Earlsboro	650	850
Little River	10,375	13,850
East Little River	475	725
Maud	1,425	1,325
Mission	2,800	3,200
Seminole	8,100	9,600
East Seminole	1,175	1,275
Searight	3,075	2,475
Total Seminole	56,700	65,825
St. Louis-Pearson	18,950	19,800
Tatums	5,500	5,700
Tonkawa-Garber-Thomas	6,500	6,250
Wewoka	4,500	4,200
Yale-Jennings	4,750	4,750
Other pools	59,725	59,525
Total Oklahoma	463,600	451,675

Tulsa and Okmulgee

Smith, Hughes and others completed a 20-bbl. well in No. 1-B Barber, SW NE NW Section 24-17-12, Tulsa County, in Wilcox sand at 2,305-06 feet.

Dodge Brothers completed a 5-bbl. pumper in No. 6 Herrod, SE NE SE Section 17-15-14, Okmulgee County, in sand at 819-56 feet.

E. Price's No. 1-A Osborne, CEL NE NE Section 17-15-14, was dry and abandoned at 852 feet. Sand at 814-52 feet was shot.

Armstrong & McCloud's No. 6 Wright, C SE Section 26-15-14, is a 40-bbl. completion from sand at 1,519-28 feet, shot with 60 quarts.

Phillip Doyle's No. 1 Coleman, NW NE SE Section 33-15-17, Muskogee County, is a 5,000,000-foot gasser, completed in sand at 1,135-45 feet.

Jake Rutz' No. 1-A Derrisaw, C SE SE Section 30-12-12, Okmulgee County, was completed, a 10-bbl. well after a shot at 1,203-32 feet.

Creek County

Atlantic Oil Producing Co., Sinclair Prairie Oil Co. and Texas Co.'s No. 2 Harjo C, NW NE SE Section 27-14-10, Creek County, was dry in Wilcox sand at 4,026-33 feet, but had production in the Simpson at 4,006-26 feet, from which it pumped 26 bbls. in 14 hours. It was completed.

Roger Mills County

Harris & Haun have definitely abandoned their test in Roger Mills County, in the far western part of the State, No.

Wildcat Operations in Oklahoma

Week Ending December 1

NORTHERN OKLAHOMA

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; lost tools and S.D.

BECKHAM COUNTY

Fred Coogan et al's No. 1 Shelton, SW cor. Sec. 33-10-25w.
Rigged up and S.D.

CADDO COUNTY

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 3-16-13w; (2,000-ft. test).
U.R. 12-in. csg. to 740 ft.; T.D. 842 ft.

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; fishing for drill pipe.

CLEVELAND COUNTY

Mid-Continent Pet. Corp. et al's No. 1 Collett, C E½ NE SW Sec. 35-10-1w.
Sandy dolomite 6,745-49 ft.; drlg. 6,970 ft.; no showing.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
Oil Creek sand 7,315 ft.; bailed to 7,000 ft.; 4 bailers of S.W. per hr.

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8.
Sandy shale at 1,000-34 ft.; S.D.

GARFIELD COUNTY

Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w.
Spudded and S.D.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-2n-3w.
T.D. 830 ft.; S.D.

GRADY COUNTY

Carter Oil Co. and Magnolia Pet. Co.'s No. 1 Harrison C-34, C NW NW Sec. 28-3-5w.
Drlg. 7,955 ft.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-8w.
Skidded rig 60 ft. N; spudded; S.D. for wtr.

HARPER COUNTY

Sinclair Prairie Oil Co.'s No. 1 Neff, NW SE Sec. 21-26-24w.
T.D. 7,378 ft.; dry and abd.

HUGHES COUNTY

Evans & Morris' No. 1 Day, NW NW SW Sec. 30-6-10 (700-ft. test).
S.D. 550 ft.

Freeman et al's No. 1 Kite, NW NW NE Sec. 5-6-10.
S.D. 154 ft.

Turner et al's No. 1 Williams, SW cor. Sec. 35-7-10.
Rig.

KAY COUNTY

Harris & Haun's No. 1 Schuessler, C NW SW Sec. 3-28-2.
Bldg. rig.

Bay Oil Co.'s No. 1 Holden, SW SW SE Sec. 14-28-2.
Drlg. 1,950 ft.

Carter Oil Co.'s No. 1 Fowler, C NE Sec. 12-27-1e.
Drlg. 1,920 ft.

Lancer Oil Corp.'s No. 1 Hugo, SE NW NW Sec. 22-28-5.
Location.

S. R. McCorkle et al's No. 1 Smith, SW cor. Sec. 6-26-4.
Moving in material.

KINGFISHER COUNTY

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
T.D. 7,612 ft.; drill pipe pulled; S.D.

LEFLORE COUNTY

East Okla. O. & G. Co.'s No. 1 Metcalf, SW cor. Sec. 2-4-26.
T.D. 2,040 ft.; hole caved; S.D.

Murdock et al's No. 1 fee, SW NE SW Sec. 15-5-25e.
T.D. 2,425 ft.; S.D.

LINCOLN COUNTY

Tom Bennett et al's No. 1 Bolby, C SE SW Sec. 27-12-2.
Cored 5,065-81 ft.; S.D. for csg.

R. L. Kemp and Comail Oil Co.'s No. 1 Dooley, NE SW Sec. 30-17-6.
Drlg. 1,540 ft.

Derrickson and Reserve Pet. Co.'s No. 1 Law, SE SW NE Sec. 25-14-3.
Rig on ground.

M. Murray and Ralph Day's No. 1 Rittenhouse, NW NW NE Sec. 26-14-6.
Wilcox 4,280-85 ft.; and 4,298-4,302 ft.; P.B. and set 6-in. 4,122 ft.

Chas. Ralph et al's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Rig on ground.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Sec. 5-14-2.
Skinner sand 4,400 ft.; T.D. 4,530 ft.; fishing.

Sinclair Prairie Oil Co.'s No. 1 Boland, SW cor. Sec. 25-12-3.
Drlg. 5,504 ft.; in sand; H.F.W.

LOGAN COUNTY

W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1.
Wilcox 5,265-85 ft.; P.B. to 5,181 ft.; will shoot Misener sand.

Gypsy Oil Co. and Sinclair Prairie O. & G. Co.'s No. 1 Manning, C NW NW Sec. 3-17-4w.
T.D. 6,411 ft.; will test Layton sand.

Helmerich-Payne et al's No. 1 Sturgis, SE NW.
Spudding.

Sinclair Prairie Oil Co. et al's No. 1 Dunbar, Sec. 25-15-4w.
Drlg. 4,130 ft.

Sinclair Prairie Oil Co. et al's No. 1 School Land, SE cor. Sec. 36-17-1w.
Drlg. 2,925 ft.

NOBLE COUNTY

Marathon Oil Co.'s No. 1 Gilbert, NE cor. Sec. 24-22-2.
Drlg. 2,210 ft.

(Continued on Next Page)

1 Williams, C SW Section 23-12-24w. at 5,150 feet. The rig was taken down and the tools moved away eight months ago.

Oklahoma County

In the Oklahoma City Field, Banner Petroleum Co.'s No. 2 Bell, NW NE Section 27-11-3w, flowed 210 bbls. in two hours with gas at the rate of 3,000,000 feet, and was shut in. It produced through 2½-inch tubing from Wilcox sand at 6,553-63 feet, which was shot with 30 quarts.

In the Edmond Pool, Marathon Oil Co.'s No. 1 Dahl, SE cor. Section 31-14-3w, flowed 1,159 bbls. in six hours through choke and then 1,189 bbls. in six hours through a 42/64-inch choke against a 1,175-lb. back pressure. It was then shut in. This well has Wilcox sand at 6,385-6,528 feet, total depth 6,532 feet.

Same company's No. 1 Keefer, NW NW NW Section 5-13-3w, also in the Edmond Pool, flowed 951 bbls. of oil in 24 hours open flow, together with 59,800,000 feet of gas. The crew ran 2½-inch tubing to 6,520 feet. It was shut in.

Watchorn Oil & Gas Co. completed No. 2 Traders Compress Co., NE NW SE SE Section 34-12-3w, Oklahoma City Pool. It flowed 3,220 bbls. of oil in 24 hours.

Okfuskee County

J. S. Wise and others, in their No. 1 Yahola, NE NW SE Section 9-12-11, Okfuskee County, found no oil or gas in Wilcox sand at 3,516-23 feet, total depth, and will plug back and test a 2,100-foot sand.

Greater Seminole Field

Atlantic Oil Producing Co. and other companies will start a wildcat community test, No. 1-A Thompson, SW SE SE Section 15-11-8, in the northeast corner of Seminole County. Location has been staked.

Snider's No. 3 Wind, 110 feet north and 330 feet east of C Section 35-11-9, Okfuskee County, was drilling at 1,100 feet.

Phillips Petroleum Co.'s No. 1 Copeland, NW SE NE Section 5-10-4, in the Shawnee district, Pottawatomie County, swabbed 228 bbls. in 21 hours from Earlsboro sand at 4,422-45 feet. It will be deepened.

Carter Oil Co. and others completed No. 1 Hollis C-32, C W half NE SW Section 18-10-6, Pottawatomie. It is estimated as a 1,000-bbl. well. It had lime and dolomite in a core at 4,586-96 feet.

Blackwell Oil & Gas Co. completed No. 1 Austin, SE NE SE Section 12-9-4, Pottawatomie County. It flowed 800 bbls. in 24 hours from Hunton lime at 4,212-40 feet.

Mid-Continent Crude Oil Purchasing Co.'s No. 1 Beal, SW NW SW Section 33-8-4, Pottawatomie County, was dry and abandoned at 4,337 feet. It topped the Simpson series at 4,296 feet, but opened up a hole full of water at 4,337 feet.

Magnolia Petroleum Co.'s No. 2 Disch, SE cor. Section 12-7-4, South St. Louis Field, was completed, a 48-bbl. well in dolomite at 3,860-3,904 feet.

Vern Brown and others' No. 1 Hitchcock, NE SE SW Section 11-7-4, swabbed 250 bbls. of oil in 16 hours from Hunton lime at 3,764-3,876 feet which had been acidized.

Magnolia Petroleum Co.'s No. 2 Jordan, NW NE NW Section 12-7-4, was acidized in Hunton lime at 3,811-4,010 feet, still in Hunton. It swabbed 32 bbls. in 1 hour and 30 minutes and was shut in for tankage.

Clark and others' No. 1 Jordan, SW SE SE Section 10-7-4, acidized in Hunton lime at 3,685-3,853 feet, flowed 186 bbls. in 48 hours. It will be deepened.

L. M. Russell completed No. 1 White, NE NE NW Section 18-7-4, in Hunton at 3,818-74 feet. It was acidized, and swabbed and flowed 543 bbls. in a 48-hour test.

Wyatt's No. 2 Smith, SE NW SE Section 26-7-4, deepened from 3,954 feet to Viola lime at 4,050-90 feet, pumped 50 bbls. of oil and 40 bbls. of water. It was completed.

Shell Petroleum Corp. completed No. 1 Yonts, NW NW SW Section 28-7-6, Seminole County. It was an old well plugged back from 4,351 feet, the casing ripped, and pay at 4,045-75 feet shot. It pumped 475 bbls. in a 48-hour test.

Moran and others' wildcat, No. 1 Brinlee, SW SW SE Section 27-6-5, Seminole County, has been abandoned. It had been drilled to 2,707 feet and plugged back and tested above 2,300 feet, but the hole filled with water.

New work in the Greater Seminole area included the following: Carter Oil Co. and others' No. 1 McKinnis C-32, C E half SE SW Section 18-10-6, Seminole County, cellar dug; Magnolia Petroleum Co.'s No. 1 Gates, NW SW NW Section 20-9-5, Pottawatomie County, moving in rotary; Oklahoma Oil Corp.'s No. 1 Patterson, NW NW SE Section 12-9-6, Seminole County, location; Magnolia Petroleum Co.'s No. 1 Jones B, NW NW NE Section 18-7-4, Pottawatomie County, location; Champlin Refining Co.'s No. 3 Wolf, NW SW NW Section 32-7-8, Hughes County, location; No. 4 Wolf, NW NW NW Section 32, cellar and pits, for a Wilcox sand test, a twin to No. 1 Wolf; Mid-Continent Petroleum Corp.'s No. 2 Schroder, NW NW NE Section 6-6-5, Pottawatomie County, will deepen from dolomite to Wilcox sand; Westgate Oil Co.'s No. 1 Schroder, NE NW NE Section 6-6-5, will deepen to Wilcox sand; Southern Oil Corp.'s No. 1 Osborn, NW SW NE Section 11-6-6, Seminole County, surface pipe set at 118 feet; Moran & Stekoll's No. 1 Stewart, NE NW SW Section 14-6-6, drilling at 390 feet.

Pontotoc County

In the Fitts Pool in Pontotoc County, Blackstock and others completed No. 1 Craddock, NE NE SE Section 25-2-6. It flowed 2,389 bbls. in three hours, or at the rate of 19,112 bbls. per day. Seven-inch pipe was set at 3,742 feet, Bromide topped at 4,025 feet and McLish at 4,245-50 feet, total depth. The crew ran 4,148 feet of 2½-inch tubing. The well made a natural flow in its three-hour test.

Fleetborn Oil Co. completed No. 2 John Morris, a twin, SE NW NE Section 25-2-6. It is a 6,000,000-foot gasser at 1,421-37 feet.

Magnolia Petroleum Co.'s No. 1 Tom Norris, C SW NE Section 25-2-6, was completed as a gasser. It is estimated this well is good for 50,000,000 feet of gas from broken sand at 1,360-1,400 feet.

E. M. Blanchard's No. 1 Crabtree, NE SE NE Section 27-2-6, was dry and abandoned at 2,220 feet.

Bristow Drilling Co.'s No. 1 Craig-Crane, NW SW NW Section 20-2-7, was dry and abandoned at 4,397 feet. Hunton lime was penetrated at 4,108-4,292 feet, and Sylvan shale was topped at 4,292 feet.

New work in the county included Blackstock and others' No. 3 Craddock, NW NE SE Section 25-2-6, rigging up rotary; Phillips Petroleum Co.'s No. 1 Norris, NE NE SW Section 25-2-6, location; No. 2 Norris, SE NE SW Section 25, location; No. 3 Norris, NE SE SW Section 25, cellar and pits; No. 4 Norris, SE SE SW Section 25, location; E. H. Moore and others' No. 1 Smith, NE cor. Section 32-2-6, location; Carter Oil Co.'s No. 3 Richards, NE NW SE Section 30-2-7, building rig; No. 4 Richards, NW NE SE Section 30, building rig; Deep Rock Oil Co.'s No. 2 Hardin, SW SE NE Section 30-2-7, rig on ground; Stanolind Oil & Gas Co. and others' No. 4 Hardin, SE NW SW Section 30-2-7, location.

Southern Counties

In Comanche County, Westheimer & Daube were drilling at 60 feet in No. 3 Watson, SW NE NE Section 24-2n-10w. Ashcraft & Palmer made a location for No. 1 Clark, NW NW SE Section 28-2n-10w. Same operators completed two small wells, Nos. 4 and 5 Pope, in a sand around 450 feet in NE NW Section 28-2n-10w, and were drilling a third well, No. 6 Pope, at 960 feet.

Crane & Ranklin's No. 5 Brown, NW NW NE Section 23-1n-9w, Stephens County, was rigged up.

Stampfs and others' No. 1 Harris, SW NW SW Section 14-9s-25e, McCurtain County, was abandoned at 2,848 feet. It had a showing of gas at 1,054-52 feet and at 1,053-60 feet.

In Marshall County, R. A. Godfrey set pipe at 542 feet in No. 7 Burge, 1,155 feet north and 1,155 feet west of SE cor. Section 25-7s-5e, and Charles Newsom had machine in to start No. 3 fee, 495 feet from north and 825 feet from east line of SE Section 36-7s-5e.

Gled Oil Co. and others' No. 1 Layton Reams, SE SW NE Section 26-2s-8e, Johnston County, was abandoned in Bromide at 2,434-39 feet. It had 1,200 feet of salt water and sulphur water in the hole.

Amos Drilling Co. was building rig for No. 1 Epley, SW NW SW Section 4-1s-3w, Carter County. Mudge Oil Co. abandoned No. 2 Walker Voorhees, NE NE SW Section 25-1s-3w, at 2,850 feet. George E. Keith has started drilling No. 2 Harmond, 810 feet from north and 510 feet from west line of SW Section 28-1s-2w.

Paul Duran abandoned No. 1 Miller, NW SE NE Section 9-1s-14e, Atoka County, in sand at 580-603 feet, total depth, which had no showing.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

OKFUSKEE COUNTY

Delton Oil Co.'s No. 1-A Fixico, SE cor. Sec. 7-11-8.
Calvin sand 2,241-67 ft.; set 6-in. csg. at 2,240 ft.; recmtng.

OKLAHOMA COUNTY

R. Carl Larkin's No. 1 Brobine, NW NW NE Sec. 33-13-3w.
Rig on ground.

J. C. Shaffer et al's No. 1 Bullard, SW cor. Sec. 13-13-2w (Wilcox test).
Set 10-in. csg. 461 ft.; T.D. 467 ft.

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; 400 ft. drill pipe in hole; S.D.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
H.F.W. 2,040 ft.

PITTSBURG COUNTY

McAllister Pet. Corp. et al's No. 1 Chunn, C SE NW Sec. 29-4-14.
Set 12-in. csg. 408 ft.; T.D. 423 ft.

P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-13.
Drlg. 350 ft.

W. E. Hailey's No. 1 Drew, NW SW Sec. 21-3-14.
S.D. 190 ft.

PONTOTOC COUNTY

Charles E. Carter et al's No. 1 Wood, NW SW SE Sec. 5-4-2.
Spudded and S.D.

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.
S.D. 2,220 ft.

Boyle et al's No. 1 Newbern, SW NE Sec. 21-5-4.
P.B. to 2,050 ft. and shot; H.F.W.; S.D.

Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-6e.
T.D. 680 ft.; S.D.

Dixie Oil Co., Inc.'s No. 1 Graham, SW SE SW Sec. 13-1-7.
Rig.

Gillette & Kroeger's No. 1 Robbins, NE SE Sec. 31-1-4.
Rig on ground.

Gillette & Kroeger's No. 1 Duver, NW SE Sec. 36-1n-6e.
T.D. 784 ft.; S.D.

J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
Shot with 40 qts. at 4,096-4,108 ft.; and 100 qts. at 3,883-3,910 ft.; hole bridged, but was cleared; 1,200 ft. oil in hole; will acidize.

Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
S.D. 850 ft.

POTTAWATOMIE COUNTY

Blackgold Pet. Co.'s No. 1 Bissell, C NE NW Sec. 15-7-8.
Drlg. 3,890 ft.

Moran et al's No. 1 Brinlee, SW SW SE Sec. 27-6-5.
H.F.W. 2,260-80 ft.; abd.; T.D. 2,707 ft.

ROGER MILLS COUNTY

Harris & Haun's No. 1 Williams, C SW Sec. 23-12-24w.
Dry and abd. 5,150 ft.

SEMINOLE COUNTY

Atlantic Oil Prod. Co. et al's No. 1-A Thompson (community test), SW SE SE Sec. 15-11-8.
Location.

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-6 (O.W.P.B.).
P.B. to 2,115 ft.; H.F.W.; S.D.

Gypsy Oil Co.'s No. 1 Grayson, SW NW Sec. 13-6-5.
Rig.

Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
T.D. 2,124 ft.; cmtng. cave.

Wofford Drlg. Co. et al's No. 1 Abbott, NE cor. Sec. 33-8-7.
Rig.

Wofford Drlg. Co. et al's No. 1 Thomas, NW SE Sec. 8-6-7.
Cellar and pits.

TEXAS COUNTY (PANHANDLE)

Ben F. Ash et al's No. 1 Guymon Townsite, C NE SE Sec. 36-3n-15e (Cimarron Meridian).
T.D. 2,420 ft.; fishing for drill pipe.

WASHITA COUNTY

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 23-9-17w.
Rigged up and S.D.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e.
T.D. 3,709 ft.; S.D. for csg.

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e.
S.D. 1,135 ft.; machine moved out.

L. A. Fitts' No. 1 Blankenship, NE cor. NW Sec. 19-3s-10e.
T.D. 651 ft.; S.D.

Malernee et al's No. 1 D. O. K. Land Co., C SE SE Sec. 36-2s-13.
Drlg. 2,982 ft.

T. C. Ramler et al's No. 1 Roberts, SW SE SW Sec. 6-2s-12e.
S.D. 1,175 ft.

BRYAN COUNTY

Hankin & Williams' No. 1 Slagg, SE SW SE Sec. 20-6s-13e.
T.D. 503 ft.; U.R. csg.

CARTER COUNTY

Daphfine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
T.D. 3,251 ft.; P.B. to 2,150 ft.; drlg. plugs; recmtng. pipe; H.F.W.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-4s-20e.
S.D. 810 ft.

COMANCHE COUNTY

F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
T.D. 1,210 ft.; fishing.

Heiden & Taylor's No. 1 Crutcher, C NE Sec. 11-1n-13w.
T.D. 863 ft.

JACKSON COUNTY

Burk Royalty Co.'s No. 1 Gore, SE NW SE Sec. 3-1s-20w.
S.D. 1,810 ft.

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,723 ft.; S.D.

Gypsy Oil Co.'s No. 1-A (Twin) Kelly, NE cor. Sec. 16-1n-20w.
P.B. to 1,424 ft. and S.D.

Gypsy Oil Co.'s No. 1-B Kelly (twin), 330 ft. S and 330 ft. W, SE cor. Sec. 16-1n-20w.
Oil sand 1,412-24 ft.; swbd. 68 bbls. of 43 grav. oil in 12 hrs.; S.D. for tankage.

Ben Russell et al's No. 1 Unknown, NW SE Sec. 30-1-22w.
Drlg. 5,160 ft., in lime.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW Sec. 10-4s-4w.
Drlg. 2,963 ft.

H. F. Young et al's No. 1 Boulden, SE SW SW Sec. 1-7-4w.
Drlg. 1,195 ft.

JOHNSTON COUNTY

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Location.

Gled Oil Co. et al's No. 1 Ferguson, SW SE NE Sec. 26-2s-8.
Bromide sand 2,434-39 ft.; 1,200 ft. salt and sulphur wtr.; abd.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,943 ft.; recovered core barrel; S.D.

McCURTAIN COUNTY

Stampfs et al's No. 1-A Harris, SW NW SW Sec. 14-9s-25e.
Dry and abd. 2,848 ft.

MURRAY COUNTY

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
Sand 2,658-70 ft.; show of oil; T.D. 2,710 ft.; reaming hole at 2,234 ft.

C. P. Williams et al's No. 1 Singleterry, SE SW NW Sec. 25-2s-3e.
Drlg. 611 ft.

STEPHENS COUNTY

Wm. Angle's No. 1 Johnson, NE cor. SE Sec. 17-1n-8w.
Recmtd. 8-in. csg.; T.D. 2,230 ft.

Carter Oil Co.'s No. 1 McCasland, C NW NW SW Sec. 23-1s-4w.
T.D. 5,317 ft.; in shale; bailed 25 bbls. per day; hole abd.

Dixie Oil Co., Inc.'s No. 1 Graham, SW SE SW Sec. 13-1n-7w.
Rig.

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; S.D. 3,230 ft.

CORRECTION

The book review on "Handbook of Chemistry and Physics," as published in The Oil and Gas Journal of November 22, incorrectly stated the price of that book as $5. The correct price is $6.

CADMAN NAMED PRESIDENT I.P.T.

Sir John Cadman has been elected president of the Institution of Petroleum Technologists for the session 1935-36, to take office immediately after the annual general meeting on March 12, 1935.

Conditions in California Are Not So Favorable; Litigation Attacking Code and Curtailment

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Dec. 3.—Conditions in California are not quite as favorable due to the development of several disturbing factors. The past week was marked by an almost endless amount of litigation and more is in prospect. Constitutionality of the code will be argued before the District Court of Appeals on January 7, on an application for a writ of habeas corpus filed on behalf of Glenn Downing who had been fined $50 or serve 50 days in jail upon conviction of violating the code. Downing, as superintendent of the Wil-Daw Oil Co., was alleged to have produced oil in excess of the amount alloted to the company.

The petroleum administrator charged the Wilshire Oil Co. this week with having produced 221,394 bbls. of crude in excess of its allowable during August, September, October and the first 19 days in November. The administrator filed suit last winter against this operator but the case was struck from the calendar when the defendants agreed to abide by the curtailment program.

The Wilshire company delivered an ultimatum to the Pacific Coast Petroleum Agency that unless it modifies its program at once it can expect trouble. The company served notice by letter and announced that it had reduced its tank wagon price of gasoline 1 cent per gallon. The letter in part states that "we point with justifiable pride to our marketing record over the past years and reluctantly make this move, assuring you that it has always been, is and will be our policy to refine and sell the best gasoline at a price that is fair to the public and that returns a reasonable margin of profit to the petroleum industry. In the event the present move should prove ineffective to preserve our established markets, please be advised that we will feel free to further combat the existing boycott of our gasoline by further price reduction."

As an aftermath of this action the Wilshire company filed suit against all major and independent refiners that are members of the Pacific Coast Petroleum Agency petitioning the court to enjoin them "from threatening to discontinue making deliveries of their gasoline to service stations handling Wilshire company gasoline." The agency recently instructed its members not to make any further deliveries to any service station that had Wilshire pumps as this company was violating the code by failing to conform with the allowable production. In its complaint, the Wilshire Oil Co. charges the defendants with "having formed a monopoly and a conspiracy to boycott its independent service station customers." It charges further that the agency and refiner agreements between the major companies and the refiners violate the Sherman Antitrust Act and other national and state laws. This case and the one mentioned above will be heard at the same time by Judge Paul McCormick.

Other Litigation

The Union Oil Co. and Shell Oil Co., jointly operating the Reyes lease in the Dominguez Field of Los Angeles Basin, rounded out the week by filing an action in the Superior Court of Judge Wilson in Los Angeles against the Mutual Oil Co. The plaintiffs assert that they own what is known as the Reyes lease executed in 1923 by Maria de Los Reyes de Francis to the Union and Shell Oil companies and that the defendants, in December of last year, began the drilling of a well on adjoining property known as the Mutual Oil Co. Carpenter lease. This well is asserted to have been drilled under the Reyes lease by artificial means and the plaintiffs petitioned the court for an order to survey the hole and if found beneath the Reyes lease to grant immediate relief and reimburse the plaintiffs for all oil produced to date.

The congressional investigation committee concluded its hearings in Los Angeles after listening to a number of operators and other interested parties. The testimony indicated an active opposition to Federal control as the preponderance of evidence was in favor of a state compact aided by Federal assistance.

Restrictions Lifted

After resisting attempts to have drilling restrictions removed for several years, the city council of Redondo Beach has finally authorized the leasing of property in the Villa Tract section immediately adjacent to the western end of the Torrance Field and proved up in part. The drilling restrictions prevented operators from crossing the city line during development of the Torrance Field with the result that there are a number of favorable locations available on the Redondo side. The city council yielded to the necessity of increasing revenue to meet current expenses but drove a hard bargain. Under the terms of the lease, the city will receive 50 per cent of all oil and gas produced. The city's interest is limited, however, to a piece of property recently purchased for city park purposes. This acreage was leased to Verne Dumas, who experienced considerable success in his operations in the Long Beach Field during its development.

The city council of Whittier has accepted a lease submitted by H. T. Coffin which involves development of property held by the municipality. The property embraces 36 acres in the undeveloped portion of Whittier known as Woodlawn Park on North Durfee Avenue. Coffin pays $3,000 down and $250 per month until drilling actually begins. The city will receive a royalty of one-sixth of all oil or gas produced.

Playa Del Rey

The big parade has started at Playa Del Rey and we may expect to see 15 or 20 wells started within a few weeks. There is one well producing, another drilling and rigs going up for six. The new area is up on the palisades in the extreme eastern end of the structure and all indications point to the development of substantial production although the productive acreage is expected to be limited in extent. C. W. Fourl, who operates the Monarch Refining Co., focused the attention of operators on this section a week or two ago by finishing his outpost flowing in excess of 5,000 bbls. per day.

This new well has apparently extended the eastern limits of production rather than opening a new field. The Playa Del Rey Field was discovered by Ohio Oil Co. and while that company holds some excellent property it now appears the Union Oil Co. controls the cream of the acreage as Fourl's new well is beyond the Union's properties and proves the intervening territory. Oil from this completion is being hauled out by trucks, but it is likely the Union will make connections and transport the oil to the Monarch refinery as this company is a member of the Pacific Coast Petroleum Agency. It is possible, however, that Fourl may install his own line as the plant is not very far from the new well.

Oil Sand

One of the most interesting features in connection with the completion of Fourl's new well is that it is the first well in the Playa Del Rey Field to log a normal sand. Heretofore, production has been secured from a conglomerate which rests directly on top of schist. There are two productive horizons, but since Fourl did not encounter the upper zone this discussion is limited to the deep zone. The conglomerate bed is not especially conducive to high production as the porosity factor is decidedly unfavorable as these rocks are well cemented. The logging of a normal oil sand in the new completion as compared with the productive conglomerate in older wells is primarily responsible for the large initial production and explains why there is such a large discrepancy in the initials of wells in this field.

Fourl's new well is structurally lower than other wells on the Union Oil Co.'s Del Rey lease and it is assumed this new producer is an outpost in the same field. There is a possibility the extension may prove larger than many anticipate. Contours based on the top of the lower sand enclose the location of Fourl's well, and while the normal trend of contour lines would indicate that an additional 50 acres may be found productive, there is still a possibility that the contours might broaden out and enclose an amount greatly in excess of this minimum.

New Drilling

Operators holding leases and acreage in the eastern end of the Playa Del Rey structure are not letting any grass grow under their feet. Union Oil Co., which holds a lease on the Vidor property which runs right up to the base of the palisades, has already started preparations to begin offset drilling and will probably augment this work within a few weeks. The company is driving piles necessary in this lowland to support the foundation for the derrick. Much of the acreage on the Vidor and Rel Rey leases of the Union are swampy and require a fill before rig construction can be undertaken. This swampy condition exists right over to the base of the palisades. The palisades rise rather abruptly and form a precipice approximately 140 feet above the level of the surrounding swampy terrain.

Fourl is making preparations to start a second well immediately and the derrick should be completed within a few days. Big Ben Oil Co. has already started to drill and the crew is giving it the gun before the town lot drilling campaign gets under way. Ed McAdams and several other operators are also getting ready to begin immediate drilling as new rigs are being rushed to completion and the drilling equipment being moved in. If the oil sand found in Fourl's well prevails throughout this section it is likely this extension work will greatly stimulate production.

Numerous Completions

There were several exceptionally large wells finished this week notwithstanding that the Kettleman North Dome Field did not yield a single new completion. Mountain View and Santa Barbara Mesa headed the list in number. New wells were finished in the Dominguez, Huntington Beach, North Belridge, Midway-Sunset, Mount Poso and Brea Olinda Fields. Judging by the amount of drilling under way, we may anticipate a large number of completions before the end of the year, and it is likely the present campaign will extend well over into 1935, especially in view of the new wells in the eastern end of the Playa Del Rey Field.

Up in the Mountain View Field, Hancock Oil Co. finished No. 1 Miller, flowing 3,750 bbls. of 28.1 gravity oil per day from 5,437 feet. This is the first

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Nov. 18		Nov. 11			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Fuel oil	195,768	27,967	283,114	40,445	11,540,253	3,419,290
Diesel and gas oil	175,352	25,050	.....	.....	1,349,883	1,227,048
Gasoline	411,554	58,793	74,320	10,617	7,233,026	9,984,296
Kerosene	.....	.....	78,913	11,273	977,579	906,294
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	.....	.....	.....	.....	54,778	90,557
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports:						
Crude oil	141,880	20,269	337,123	48,160	7,260,925	6,641,509
Fuel oil	406,559	58,080	363,393	51,913	11,800,204	6,918,581
Diesel and gas oil	55,474	7,925	94,260	13,466	3,586,701	2,952,035
Gasoline	.....	.....	104,478	14,925	4,240,119	5,023,785
Kerosene	3,012	430	106,910	15,273	1,589,518	1,791,997
Other finished oil	.....	.....	.....	.....	37,955	12,086
Other unfinished oil	.....	.....	.....	.....	230,745	66,275
Coastwise-domestic:						
Crude oil	.....	.....	65,131	9,304	7,118,427	5,891,821
Fuel oil	184,169	26,310	199,162	28,452	8,523,807	9,332,705
Diesel and gas oil	51,458	7,351	.....	.....	667,929	931,557
Gasoline	225,360	32,194	391,774	55,958	11,938,810	11,067,733
Kerosene	.....	.....	.....	.....	137,963	172,796
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	.....	.....	599,613	603,697
Gasoline	.....	.....	.....	.....	865,283	804,548
Kerosene	.....	.....	.....	.....	276,593	452,430
Lubricants	.....	.....	.....	.....	46,693	33,934
Foreign exports:						
Crude oil	96,511	13,787	63,918	9,131	1,761,594	1,698,661
Fuel oil	22,092	3,156	16,101	2,300	1,918,023	1,795,231
Diesel and gas oil	.....	.....	.....	.....	1,164,102	907,646
Gasoline	90,383	12,912	.....	.....	2,695,909	3,857,056
Kerosene	.....	.....	.....	.....	1,008,223	928,320
Lubricants	.....	.....	.....	.....	164,257	115,977
Other finished oil	.....	.....	.....	.....	2,760	3,745
Other unfinished oil	.....	.....	.....	.....	5,750	26,278
Coastwise-domestic:						
Fuel oil	32,960	4,709	97,942	13,992	4,316,636	3,457,726
Diesel and gas oil	.....	.....	.....	.....	119,636	274,745
Gasoline	107,291	15,327	144,952	20,708	4,962,391	3,865,202
Kerosene	.....	.....	.....	.....	82,434	106,161

completion of this company in this field but it should have another ready for a production test early in the new year as No. 2 on the same lease is well under way. Allen Brown, Inc., completed No. 1 Wells in the Mountain View Field flowing 1,374 bbls. of 25.9 gravity oil and 450,000 feet of gas per day. This well was bottomed at 5,763 feet and finished with a 5-inch liner carrying 201 feet of perforated. Union Oil Co. has started rig construction for a well to be drilled on Kernco lease B in the extreme western end. The well is a long way out in the sticks. It is almost as far removed from production as was Union's first test on the original Kernco lease. Union's last completion, No. 2 Wible, registered a potential of 3,020 bbls.

North Belridge

Belridge Oil Co. added another well in the North Belridge Field this week when No. 10-35 was brought in flowing 2,644 bbls. and 2,100,000 feet of gas per day from 5,446 feet. It was finished with a 6⅝-inch liner carrying 530 feet of perforated and a 4¾-inch flow string. The next completion of this company should be No. 16-35, rotating in the pay

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IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
General Pet. Co., No. 11 Capitan, Santa Barbara Co.	32- 5-30	3,130	plug 2,600
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32- 5-30	3,104	zone wet
Shell Oil Co., No. 3 Capitan, Santa Barbara Co.	5- 4-30	445	cmtd.
Royalty Serv. Corp., No. 1 Los Alamos, Santa Barbara Co.	35- 9-32	4,500	suspended
Union Oil Co., No. 3 Santa Maria, Santa Barbara Co.	35-10-34	1,835	sd. sh. drlg.
York-Smullin, No. 2 Lompoc, Santa Barbara Co.	33- 8-34	mtl.	bldg. rig
Barnsdall-Rio Grande, No. 8 Doty Elwood, S. Barbara Co.	15- 4-29	5,732	redrlg. 3,240
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	3,775	suspended
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	5,232	rd. sd. drlg.
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17- 4-28	4,850	redrlg. 4,299
Ortega Oil Co., No. 1 Summerland, Santa Barbara Co.	16- 4-26	4,583	cmtd.
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	suspended
General Pet. Co., No. 4 Rincon, Ventura Co.	tideland	....	bldg. pier
Continental, No. 3 San Miguelito, Ventura Co.	23- 3-24	7,015	redrlg. 5,980
Las Posas Pet., No. 1 Las Posas, Ventura Co.	23- 3-20	7,370	fishing
Fisher, Daniel, No. 1 South Mountain, Ventura Co.	5- 3-19	765	suspended
Texas Co., No. 128 South Mountain, Ventura Co.	4- 3-19	5,298	rd. sh. drlg.
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,408	br. sh. drlg.
Bolsa Chica Oil Co., No. 2 Piru, Ventura Co.	4- 4-18	461	fishing
Piru Oil Co., No. 1 Piru, Ventura Co.	14- 4-18	3,545	suspended
Dawson Oil Co., No. 1 Simi, Ventura Co.	5- 2-17	1,800	gr. sd. drlg.
Rancho Oil, Inc., No. 1 Ojai, Ventura Co.	13- 4-23	2,525	hd. sd. drlg.
Continental Oil Co., No. 1 Ojai, Ventura Co.	12- 4-23	936	cleaning out
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	7,194	P.B. 7,110
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	2,300	reaming
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	6,504	cmtd.
General Pet., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	8,523	redrlg. 8,380
Standard Oil Co., No. 1-A North Belridge, Kern Co.	36-27-20	4,473	sd. sh. drlg.
Amerada Pet., No. 1 Blackwells Corner, Kern Co.	17-26-19	3,380	br. sh. drlg.
Amarron Oil Co., No. 1 Delano, Kern Co.	14-25-27	....	location
Home Corp., No. 1 McFarland, Kern Co.	16-26-27	2,102	suspended
Ohio Oil Co., No. 1 McVan, Kern Co.	22-27-27	1,486	sd. sh. drlg.
Pell Oil Co., No. 1 McVan, Kern Co.	14-27-27	1,575	sd. sh. drlg.
Buckeye Union Oil Co., No. 1 McVan, Kern Co.	11-27-27	1,169	cleaning out
Hancock Oil Co., No. 1 Mountain View, Kern Co.	14-30-28	5,437	3,570 b.d.
Associated Oil Co., No. 1 Mountain View, Kern Co.	3-31-29	4,330	sd. sh. drlg.
Associated Oil Co., No. 2 Mountain View, Kern Co.	14-30-28	4,931	sd. sh. drlg.
Union Oil Co., No. 3 Mountain View, Kern Co.	23-30-28	5,560	1,860 b.d.
Union Oil Co., No. 4 Mountain View, Kern Co.	15-30-28	5,500	sd. sh. drlg.
Union Oil Co., No. 5, Mountain View, Kern Co.	15-30-28	1,202	cmtd.
General Petroleum, No. 3 Mountain View, Kern Co.	14-30-28	mtl.	bldg. rig
Texas Co., No. 4 Mountain View, Kern Co.	14-30-28	rig	rigging up
Barnsdall, No. 3 Mountain View, Kern Co.	31-30-29	5,552	sd. sh. drlg.
Hogan Pet., No. 6 Mountain View, Kern Co.	4-31-29	2,593	sd. sh. drlg.
Standard Oil Co., No. 4 Mountain View, Kern Co.	23-30-28	rig	rigging up
National Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	5,604	redrlg. 2,098
Gilmore-Snyder Oil Co., No. 2 Mountain View, Kern Co.	24-30-28	1,842	sd. sh. drlg.
Glico, Inc., No. 2 Edison, Kern Co.	23-30-29	2,110	cleaning out
Jergins Trust, No. 3 Edison, Kern Co.	14-30-29	1,293	O. S. cmtd.
Jergins Trust, No. 4 Edison, Kern Co.	24-30-29	rig	suspended
Consd. Crude Oil Co., No. 1 Edison, Kern Co.	17-30-29	rig	rigging up
Shell Oil Co., No. 1 Edison, Kern Co.	16-30-29	4,276	cleaning out
Shell Oil Co., No. 2 Edison, Kern Co.	15-30-29	1,201	sd. sh. drlg.
Monterey Expl. Co., No. 4 Edison, Kern Co.	15-30-29	1,161	sd. sh. drlg.
Texas Co., No. 1 Edison, Kern Co.	4-30-29	1,966	O. S. drlg.
Centralia Oil Co., No. 2 Edison, Kern Co.	26-30-29	rig	suspended
North American, No. 1 Edison, Kern Co.	14-30-29	1,654	sd. sh. drlg.
General Pet., No. 1 Edison, Kern Co.	14-30-29	3,046	P. B. 2,880
General Pet., No. 2 Edison, Kern Co.	15-30-29	1,091	sd. sh. drlg.
Lee Oil Co., No. 1 Edison, Kern Co.	6-30-29	4,025	flow 50 b.d.
Surety Oil Co., No. 1 Edison, Kern Co.	32-29-29	rig	suspended
Woodward Oil Co., No. 1 Edison, Kern Co.	31-29-30	mtl.	bldg. rig
Caravel Pet., No. 1 Sivert, Kern Co.	19-30-30	1,925	redrlg.
Sea Cliff Oil Co., No. 1 Greenfield, Kern Co.	7-31-28	rig	rigged up
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	1,455	sd. sh. drlg.
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	8-27-22	515	sd. sh. drlg.
101 Oil Co., No. 1 Elk Hills, Kern Co.	5-30-24	rig	rigged up
Richfield Oil Co., No. 1 Devil's Den, Kern Co.	14-25-18	rig	rigging up
Texas Co., No. 1 Temblor, Kern Co.	29-29-21	rig	rigging up
Shell Oil Co., No. 1 Buena Vista, Kern Co.	9-32-25	mtl.	bldg. rig
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-25	6,258	suspended
Russ Oil Synd., No. 1 Dos Palos, Fresno Co.	28-12-11	4,514	hd. sh. drlg.
Bergman, Harry, No. 1 Dos Palos, Fresno Co.	12-12-11	6,138	suspended
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	redrlg. 8,370
Texas Co., No. 1 Coalinga, Fresno Co.	8-22-18	10,154	redrlg. 8,350
Western Gulf, No. 2 S. P., Fresno Co.	35-20-14	1,040	sd. sh. drlg.
Farrell Pet., Well No. 1, San Luis Obispo Co.	11-17-15	6,860	sd. sh. drlg.
K. N. D. A., No. 56 Kettleman, Kings Co.	18-21-12	1,432	hd. sh. drlg.
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings Co.	21-22-20	2,490	gas—shut in
Commonwealth Consd. Gas No. 3 Tulare Lake, Kings Co.	21-22-20	rig	suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-23-16	812	sd. sh. drlg.
General Pet., No. 1 Devil's Den, Kings Co.	20-24-18	rig	suspended
Trico Oil & Gas Co., No. 3 Alpaugh, Kings Co.	3-25-23	2,480	gas—shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16-1	5,615	hd. sh. drlg.
Milham Exploration Co., No. 3 Tracy, San Joaquin Co.	24- 3-4	3,371	sd. sh. drlg.
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	8,220	gas—shut in
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	2,031	hd. sh. drlg.
Texas Co., No. 1 Petrolia, Humboldt Co.	1- 3-2	366	sd. sh. drlg.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Clayton, G. L., No. 1 Cerritos, Los Angeles Co.	31- 3-12	6,698	suspended
Kelly & Son., No. 1 Torrance, Los Angeles Co.	7- 4-13	7,496	sd. sh. drlg.
Speik, F. A., No. 1 Athens, Los Angeles Co.	2- 3-14	rig	rigged up
Houser, G. W., No. 1 Athens, Los Angeles Co.	18- 3-14	4,037	cleaning out
Macrate, A. N., No. 1 Athens, Los Angeles Co.	18- 3-14	4,156	redrlg.
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27- 2-14	7,985	W.S.O. N.G.
Madison Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-14	mtl.	bldg. rig
Fourl, C. W., No. 2 Del Rey, Los Angeles Co.	27- 2-15	mtl.	bldg. rig
Union Oil Co., No. 6 Del Rey, Los Angeles Co.	27- 2-15	mtl.	bldg. rig
Big Ben Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	1,080	sd. sh. drlg.
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	5,053	sd. sh. drlg.
Rex Anglin Dev. Co., No. 1 Los Nietos, Los Angeles Co.	29- 3-11	1,183	sd. sh. drlg.
Partridge & Chambers, No. 1 Whittier, Los Angeles Co.	22- 2-11	....	location
Standard Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	8,321	plug 3,500
Universal Consd., No. 4 Montebello Deep, Los Angeles Co.	6- 2-11	rig	rigging up
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23- 2-10	1,301	sd. sh. drlg.
Deep Rock Oil Co., No. 1 Puente Hills, Los Angeles Co.	23- 2-10	2,524	pump 70 b.d.
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30- 2-9	4,090	br. sh. drlg.
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	3,350	fishing
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	4,702	O.S. reaming
Explorers Drilling Co., No. 1 Fairview, Orange Co.	9- 6-10	945	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	6,485	suspended
B. & B. Oil Co., No. 1 Newport, Orange Co.	19- 6-10	1,833	sd. sh. drlg.
Mid-Rich Drlg. Co., No. 1 Atwood, Orange Co.	26- 3-9	4,085	suspended
Great American Pet. Co., No. 2 East Coyote, Orange Co.	19- 3-9	2,000	reaming
Great American Pet. Co., No. 1 Chino, San Bernardino Co.	18- 2-8	2,462	suspended
Great American Pet. Co., No. 3 Chino, San Bernardino Co.	7- 2-8	321	hd. sh. drlg.
Tehama Pet., No. 1 Santa Ana Canyon, S. Bernardino Co.	33- 2-8	2,698	cleaning out
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-18-2	5,785	hd. sd. drlg.
Edmonds, E. A., No. 1 Trustee, San Diego Co.	29-15-3	2,431	hd. sd. drlg.
Everts Drlg. Co., No. 1 Camp Kearney, San Diego Co.	23-15-3	941	redrlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	375	cmtd.

at 8,898 feet and scheduled for completion in the deep Wagonwheel zone of Eocene age. It should register substantial production. Failure of Amerada Petroleum Corp.'s wildcat in the Blackwells Corner section to show commercial production has prompted the company to resume drilling operations. The shallow sand looked rather good and it offers promise with depth.

Two new wells were chalked up in the Midway-Sunset Field of Kern County this week, but neither showed substantial production. Standard's No. 27-15-D in Section 15-32-24 was brought in flowing 477 bbls. of 27.9 gravity oil and 720,000 feet of gas per day. It was completed at 2,780 feet and finished with a 7-inch liner including 100 feet of perforated. Although it did not show substantial production it will return a satisfactory income due to the shallow depth. Honolulu Oil Corp. completed No. 2 in Section 14-32-24 good for only 35 bbls. of 26.5 gravity oil per day on the beam. It was finished at 3,612 feet but the company was obliged to plug back to 2,760 feet.

Santa Barbara

Operators in the Santa Barbara Mesa Field completed four wells and preparations are being made to finish two more within the week. The best well was Fred Cole's No. 5 Mesa, finished flowing 1,526 bbls. of 18.7 gravity oil per day. It was bottomed at 2,020 feet and was completed barefoot as the hole is open at 1,969-2,020 feet. No tubing was used and the well is flowing through the casing under a pressure of 340 pounds. This operator is rigging up two additional wells on the same lease. Allied Petroleum Co. was unable to complete No. 16 Mesa under a natural flow and was obliged to finish it on a compressor. It registered an initial daily production of 320 bbls. of 18.3 gravity oil from 2,078 feet.

W. F. Higgins also found it necessary to install a compressor when finishing No. 1 Santa Barbara, completed doing 319 bbls. of relatively clean 18.5 gravity oil per day from 2,075 feet. Mid-Coast Oil Co. got a 400-bbl. pumper upon the completion of No. 3 Rogers at 2,120 feet. Rio Grande Oil Co., which recently took over the Perkins lease, should have its second producer completed within the next week and this will be followed by another.

Huntington Beach

Standard Oil Co. added an excellent well in the Huntington Beach Field upon completion of No. 70-B located in the Barley Flats area. Bottomed at 4,350 feet, it was brought in flowing 2,574 bbls. of 24.5 gravity oil and 1,575,000 feet of natural gas per day. P. C. C. Oil Co. got only a 75-bbl. pumper upon completing No. 2 Plavan at 3,969 feet. Shell finished a good well in the Dominguez Field, No. 28 Reyes, flowing 864 bbls. of 28.6 gravity oil per day. It was bottomed at 4,750 feet and finished with a 4¾-inch liner carrying 110 feet of perforated.

In the Puente Hills section of the Brea Olinda Field of Los Angeles Basin, Deep Rock Oil Co. finished No. 2 Rowland pumping approximately 85 bbls. of 19.9 gravity oil per day from 2,524 feet after the hole had been plugged back from 2,540 feet. Two new wells were added in the Mount Poso Field of Kern County. Union's No. 16 S. & M. was finished pumping 960 bbls. of 16.4 gravity oil per day from 1,941 feet. Shell's No. 12 Security, bottomed at 1,742 feet and finished with a 6⅝-inch liner carrying 141 feet of perforated, was completed pumping 217 bbls. of 16.3 gravity oil per day.

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Administrator's Report on Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended November 24 totaled 326,323,000 bbls., a decrease of 1,353,000 bbls. from the total of 327,676,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This decrease, which followed a decline of 1,396,000 bbls. during the previous week, comprised decreases of 1,189,000 bbls. in stocks of domestic crude and 164,000 bbls. in stocks of foreign crude.

According to current reports of the industry, crude oil production decreased and consumption increased. Daily average crude oil production amounted to about 2,400,000 bbls., or about 45,000 bbls. less than the average of the previous week. Crude runs to stills showed an increase of 10,000 bbls., the daily average being about 2,580,000 bbls., compared with 2,570,000 bbls. the previous week. Daily average imports were 67,000 bbls., a decrease of 25,000 bbls. from the previous week. The approximate daily average balance of crude oil in the week ended November 24 was as follows (barrels): Production, 2,400,000; imports, 67,000; decrease in stocks, 193,000, equals runs to stills, 2,580,000; exports, fuel and losses, 80,000.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies Nov. 17 (bbls.)	Nov. 24 (bbls.)
Pennsylvania Grade	4,661,000	4,641,000
Other Appalachian	1,124,000	1,120,000
Lima-N.E. Indiana-Michigan	1,278,000	1,219,000
Illinois-S.W. Indiana	11,339,000	11,382,000
N. Louisiana and Arkansas	9,830,000	9,776,000
West Texas and S.E. New Mexico	29,985,000	29,789,000
East Texas	30,355,000	30,840,000
Other Mid-Continent	155,541,000	154,251,000
Gulf Coast	18,847,000	18,855,000
Rocky Mountain	27,637,000	27,551,000
California	33,996,000	33,980,000
Total dom. crude	324,593,000	323,404,000
Foreign crude	3,083,000	2,919,000
Total crude	327,676,000	326,323,000

Samuel Kier's Grandson Dies of Strange Ailment

OIL CITY, Pa., Dec. 3.—Frank J. Kier, last surviving grandson of Samuel Kier, whose "medicinal oil" led to the drilling of the Drake well, died Thursday night in Johns Hopkins Hospital, Baltimore.

Mr. Kier, a Pittsburgh attorney, had gone to Baltimore Thursday for treatment for a heart ailment, but died before members of the Johns Hopkins staff could determine the exact nature of his affliction.

He was well known in this section through his efforts on behalf of the Diamond Jubilee of Oil celebration. He sent the original contract between his father and Colonel Drake for the output of the latter's well to Titusville for the celebration and it has since been placed in the Drake museum at the Drake Well Memorial Park. He also attempted to have what is believed to be the second oldest oil still in the world moved to the jubilee celebration. The still is at Saltsburg, but was in such deteriorated condition it could not be sent.

Mr. Kier was a graduate of the University of Pennsylvania where he was captain of the Penn crew and an outstanding athlete.

He is survived by his widow, the former Mis Mary Myler; one son, Myler Kier, and a daughter, Francis Myler Kier, who is now the wife of Baron Jean Pellenc, distinguished relative of Swedish royalty.

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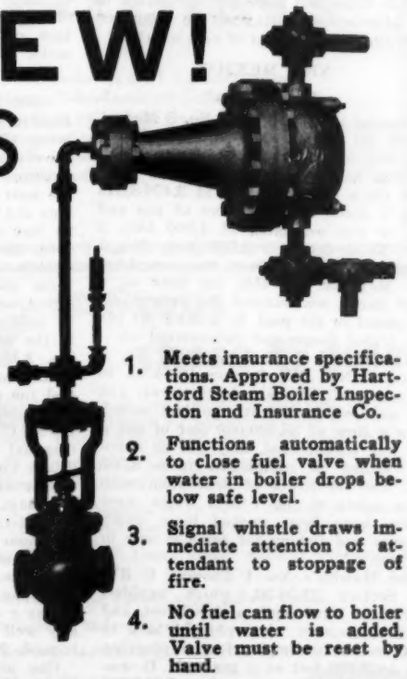
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Cooper Pool Well Rated 4,000 to 5,000 Barrels; Eunice Pool Extended Mile and Half West

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Dec. 3.—The General Crude Oil Co.'s No. 3 Meyers, in the Cooper Pool, in New Mexico, is rated at 4,000 to 5,000 bbls. a day. An extension of the Eunice Pool 1½ miles to the west is indicated in the Shell Petroleum Corp.'s No. 1 State-Endura, a near completion. Humble Oil & Refining Co.'s No. 1-B State, an offset to the Texas Co.'s No. 1 Rector, made 116 bbls. through a 1-inch choke on the tubing the first hour. One new location was staked in the Eunice Pool. Two near completions were reported in the Jal Pool and one new location was made in the Hobbs Pool. One new location was staked and two wells were abandoned in Eddy County.

The Colorado State Land Board has issued new rules and regulations for the leasing of state land and this action is expected to aid operators in blocking up their acreage. The Leslie R. Steele test near Boulder will be saved as a commercial gas well.

Wyoming had no new operations or completions. The California Co. is preparing to test an oil show in the Muddy on the Quealy Dome in Albany County.

Operations in Montana are decreasing as winter weather holds back development. R. C. Jeffries' No. 1 Luckens, a town lot well in Cut Bank, swabbed 328 bbls. first 24 hours. Only one new location was made in the Cut Bank Field. A 20-bbl. well was completed in the Kevin-Sunburst Field, and one new operation in Pondera was reported.

Mountain Fuel Supply Co.'s Clay Basin test in Utah had more gas saturation in the Morrison, but may not be completed until spring on account of cold weather.

NEW MEXICO

Cooper Area

General Crude Oil Co.'s No. 3 Meyers, C NW SE Section 22-24-36, approximately 1,500 feet to the west of its No. 1 Meyers, has been completed as a large well. On a drill stem test at 3,470-3,515 feet, it made 3,750,000 feet of gas and the oil was estimated at 4,000 bbls. a day. Total depth is 3,515 feet. No. 1 Meyers, which it offsets, was completed last May for 225 bbls. an hour on a short gauge, and started the present development in the pool. It was an old gas well drilled deeper and encountered oil.

Humble Oil & Refining Co.'s No. 1 Coats, C NW NE Section 10-24-36, to the north of the main development, and the well which caught fire last month when a flow of 38,000,000 feet of gas a day was encountered, may yet be saved and drilled to completion from 3,355 feet. The 56 joints of drill stem with seven joints of the 7-inch, which were frozen, have been worked loose under pressure and fishing for same is now in progress.

The Humble's No. 1 Thomas, C SW SE Section 23-24-36, which swabbed water at a total depth of 3,602 feet, and failed to improve when plugged back to 3,586 feet, was completed after plugging back to 3,470 feet as a gas well. It was not gauged but is estimated at 7,500,000 feet a day. The 7-inch was cemented at 3,450 feet. It is on the eastern side of the pool.

The Humble's No. 3 Cooper, C SW SE Section 14-24-36, cemented the 13⅜-inch at 286 feet with 125 sacks and is drilling at 640 feet in red beds. Empire Gas & Fuel Co.'s No. 1 Everett, C NE SW Section 35-24-36, set the 9⅝-inch at 1,501 feet with 1,000 sacks, and is drilling at 2,875 feet in anhydrite and salt. It topped the anhydrite at 1,167 feet and the salt at 1,497 feet. The elevation is 3,277 feet.

Gypsy Oil Co.'s No. 1 Cooper, C SW SE Section 23-24-36, which last week was reported heading once every hour and making an estimated 400 bbls. a day at 3,580 feet, total depth, is shut down for orders and has not yet been gauged. Continental Oil Co.'s No. 1 Gates, C NE NW Section 23-24-36, set whipstock at 3,273-3,415 feet with 50 sacks and is drilling by four joints of 7-inch. Total depth is 3,460 feet. Amerada Petroleum Corp.'s No. 1 Everett, C NE NW Section 35-24-36, found the base of the salt at 2,890 feet and the top of the brown lime at 2,937 feet, and is drilling at 2,942 feet in anhydrite and lime. The elevation is 3,290 feet. The Texas Co.'s No. 1 Everett, C SE NW Section 35-24-36, is coring at 3,340 feet in lime. It had gas at 3,235-50, 3,262-78, 3,284-88 and 3,298-3,318 feet. It topped the brown lime at 2,917 feet and the elevation is 3,288 feet. Stanolind Oil & Gas Co.'s No. 3-A Meyers, C SW NE Section 22-24-36, began spudding November 13 and cemented the 10-inch on bottom at 239 feet with 140 sacks and is waiting. Phillips Petroleum Co.'s No. 6 Woolworth, C NW NW Section 26-24-36, is killing gas after losing circulation at 3,350 feet, total depth. The gas was at 3,334-50 feet. Its No. 9 Woolworth, C NW NE Section 27-24-36, is redrilling at 1,721 feet in salt after plugging back from 2,112 to 1,508 feet to straighten crooked hole. The same company's No. 10 Woolworth, C NE NW Section 26-24-36, began spudding November 19 and cemented the 12½-inch on bottom at 215 feet with 150 sacks.

Eunice Area

Shell Petroleum Corp.'s No. 1 State-Endura, C SE NE Section 12-21-35, is being closely watched as it gives evidence of being a good producer and extending the Eunice Pool 1½ miles to the west. It was drilled to 3,248 feet in lime and cored a sweet oil show at 3,178-94 feet and gas at 3,220-30 feet. However when tubing was run to test it swabbed dry. Then when the tubing was being pulled it began flowing gas. The string was then rerun and the hole will be acidized. The location is 1½ miles to the west of the Continental Oil Co.'s No. 8-B Meyers, the nearest producer. It topped the brown lime at 3,020 feet and the elevation is 3,588 feet.

Humble Oil & Refining Co.'s No. 1-B State, C SW NW Section 29-21-36, a diagonal offset on the northeast to the Texas Co.'s No. 1 Rector, which opened a new area to drilling to the south of the main development, was completed at 3,971 feet and made 116 bbls. of oil in one hour through the tubing and a 1-inch choke. The back pressure on the tubing was 250 pounds and the oil was accompanied with a flow of 1,920,000 feet of gas a day. The well responded unusually well to acidization. Before treating it made 97 bbls. in 24 hours.

One new location was made in Tide Water Oil Co.'s No. 3 State-Foster, C NW NE Section 8-21-36, one location to the north of its No. 1 State-Foster and an outside well.

Peerless Oil & Gas Co.'s No. 1 State, C NW SW Section 29-21-36, is rigging up rotary, and Atlantic Oil Co.'s No. 1-F State, C SW SW Section 29-21-36, had a gas show at 3,315 feet and is drilling at 3,525 feet in lime. Skelly Oil Co.'s No. 1-B State, C NW NW Section 16-21-36, began spudding November 18 and is drilling at 950 feet in red beds, and Tide Water Oil Co.'s No. 4 Coleman, C SE NE Section 17-21-36, is drilling at 3,712 feet in sandy lime. The Texas Co.'s No. 2 Rector, C SE SE Section 30-21-36, is a near completion at 3,726 feet, total depth. In a drill stem test at 3,635-70 feet it showed for 3,755,000 feet of gas and 14 joints of water. The Shell-Devonian Co.'s No. 1 State, C SW NE Section 20-21-36, is preparing to acidize after plugging back to 4,040 feet.

Continental Oil Co.'s No. 18-A-2 Lockhart, C SW SE Section 18-21-36, cemented the 7⅝-inch at 1,652 feet with 400 sacks. It is bottomed in salt at 1,654 feet. Same company's No. 1-B-9 Meyers, C NE SW Section 9-21-36, is drilling at 2,620 feet in anhydrite, and its No. 8-A-2 Meyers, C SE SW Section 8-21-36, ran the 2½-inch tubing to 3,897 feet and is preparing to test. Total depth is 3,900 feet. Continental's No. 17-A-4 Meyers, C NE SW Section 17-21-36, is preparing to pump at 3,997 feet, total depth. It was estimated at 200 bbls. a day after being treated with acid several times. The same company's No. 30-A-1 Lockhart, C SE NE Section 30-21-36, is rigging up rotary. Gypsy Oil Co.'s No. 2 Bell-State, C SE SE Section 8-21-36, began spudding November 18, set the 10-inch at 365 feet with 225 sacks, and is drilling at 1,277 feet in anhydrite.

Jal Area

Continental Oil Co.'s No. 12-A-2 Wells, C NW NE Section 12-25-36, is a near completion. It is drilling at 3,385 feet in lime and a drill stem test at 3,343-50 feet showed for 18,000,000 feet of gas a day. The Texas Co.'s No. 2-B Shepard, NW NE SE Section 6-26-37, also is a near completion. It is bottomed at 3,241 feet in lime and had oil and gas at 3,105-12 and 3,126-32 feet and flowed for 30 minutes. It was not gauged, but was estimated at 11 bbls. an hour. It is standing treated with 2,000 gallons of acid. The Empire Gas & Fuel Co.'s No. 1 Dyer, NE SW SE Section 31-25-37, cemented the 9⅝-inch at 1,482 feet with 1,000 sacks. It topped the anhydrite at 970 feet and the salt at 1,097 feet. The elevation is 2,991 feet.

Hobbs Area

One new location in the Hobbs Pool was staked in Continental Oil Co.'s No. 2 Grimes, CSL SE SE Section 28-18-38, a west offset to the Shell Petroleum Corp.'s No. 1 Sanger, on the northeastern side of the pool. Gypsy Oil Co.'s No. 1 North Grimes, SW cor. Section 21-18-38, began spudding November 25 and is drilling at 210 feet in the red beds.

Maljamar Area

The Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, which swabbed 30 bbls. a day at 2,330 feet, is shut down at 2,585 feet in anhydrite. It will drill to the deeper pay at around 4,000 feet.

Big Eddy Area

Stanolind Oil & Gas Co.'s No. 1 Duncan, E SE SW Section 30-21-30, Big Eddy district, is drilling at 2,320 feet in salt. The 10¾-inch was cemented at 337 feet with 90 sacks.

Lea Area

The Texas Co.'s No. 4-A Lynch, C SE NE Section 34-20-34, is drilling at 3,550 feet in lime, and its No. 1 Elliott, C NE NE Section 22-20-34, is drilling at 2,820 feet in salt. The same company's No. 1 Swearingin, C NE SW Section 8-20-34, cemented the 8¼-inch on bottom at 1,536 feet with 75 sacks and is waiting.

Eddy County

Neil Wills and others' No. 1 Montgomery, CSL NW NE Section 10-23-30, Salt Lake district, is rigging up machine. The Pecos Valley Drilling Co.'s No. 1 Mock, NE SW SW Section 29-24-27, Black River district, is rigged and ready to spud. Last named was reported an operation of the Pecos Valley Gas Co., which is corrected.

One new operation in the Artesia area was reported in Flynn, Welch & Yates' No. 70 State, C SW NW Section 27-18-28, which is drilling at 305 feet in red beds. R. D. Compton's No. 6 State, SW NE SW Section 15-16-23, is reported abandoned without plugging at 952 feet. Red Lake Oil Co.'s No. 3 State, SW cor. NE Section 22-17-28, is bottomed at 1,713 feet in salt and running the 6⅝-inch to that depth. The Pecos Valley Gas Co.'s No. 10 Vandagriff, E NW NE Section 8-17-28, set the 8¼-inch on bottom at 573 (cor.) feet and shut down for repairs.

Oil Well Drilling Co.'s No. 1 Baker, SE NE NE Section 21-21-26, Carlsbad district, which has been shut down at 1,155 feet since August, 1931, is reported abandoned at that depth without plugging. It had a hole full of water and 9 feet of oil at 1,120-55 feet. A. & M. Petroleum Co.'s No. 1 State, SW NE Section 15-21-27, is drilling at 1,040 feet in lime and anhydrite.

Flynn, Welch & Yates' No. 2 Story, C NE SW Section 30-19-30, Getty area, cemented the 12½-inch at 213 feet, and the 10-inch at 350 feet, with 50 sacks, and is drilling at 725 feet in salt.

Chaves County

C. J. Frank and others' No. 1 Roswell Insurance, NE cor. SE Section 30-11s-25, Roswell district, which gives promise of opening a small pool, has not yet been tested. It is bottomed at 996 feet and had a show of oil at 955-996 feet. It was treated with 500 gallons of acid and flowed about 40 bbls. in two and one-half hours. It was then re-treated with 600 gallons, but did not flow. It is preparing to swab. Comanche Drilling Co.'s No. 1 Sloop-Purcell, NE cor. SE Section 10-11-26, is shut down at 935 feet in anhydrite, and the Roswell Oil Syndicate's No. 1 Hinkle, C NE SE Section 17-11-27, is drilling at 1,675 feet in lime.

Roosevelt County

The Claudell Development Co.'s No. 1 Wilmes, C SW SE Section 21-2s-30, cemented the 10-inch at 1,343 feet with 500 sacks and is waiting.

San Juan County

Continental Oil Co.'s No. 39 Rattlesnake, SE NW NW Section 12-29-19, Rattlesnake Field, cemented the 6⅝-inch at 774 feet and is testing sand at 781-797 feet.

COLORADO

One of the handicaps to a major leasing campaign in eastern Colorado was removed this week when the Board of Land Commissions released a new set of rules and regulations governing the granting of oil and gas leases on state land. The action of the board comes at a time when all indications point to the area east of the Rockies developing into the next big play of the wildcatters. Numerous seismograph surveys have been made in that area the past summer and next spring is expected to see a larger number

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of crews in the field than at any time in the past.

Heretofore blocking up of acreage was hindered by the old regulations concerning state land which are now superseded by the new rules. Formerly the state retained 160 acres out of each section leased. This prevented solid blocking. The leases carried provisions for drilling within six months. While the board was lenient in regard to this provision, some companies, nevertheless, hesitated in assuming such obligations. The new regulations provide for 10-year leases with no specific drilling date. The old lease form did not lend itself readily to trading, while the new form embraces the best features of commercial leases.

The board, in recognition of the growing interest in eastern Colorado, is desirous of aiding to the extent of its ability the development of the area and after an extensive study of the situation has decided upon a policy which is expected to be very satisfactory to prospective operators in the state. A summary of the new regulations is as follows:

Applications will be received upon a maximum area of 2,560 acres each, being the entire area of a section or subdivisions of sections without any reservation of acreage. Area in applications to be confined within the exterior limits of four adjacent counties and as nearly compact as possible, subject to approval by the board.

Departmental Fees—For filing applications and issuing leases, 11 cents an acre. Under no condition will an application be received and filed without payment in advance of the departmental fee.

Second—Conditions of Lease:

Term of lease, 10 years. No specific date to be fixed for commencement of drilling.

Rental—Minimum rental of 25 cents per acre annually, payable semiannually in advance, for the first five-year period of the lease. Minimum rental of 50 cents per acre, payable semiannually in advance, for the second five-year period of the lease.

Royalty—12½ per cent of the market value of each day's gross production.

Should lessee discover and develop a producing oil and/or gas well or wells during the period of this lease, that shall produce oil and/or gas in commercial quantities, then, in that case, lessee is hereby granted the possession of such producing well or wells and the 40-acre subdivisions of state land adjacent thereto within a radius of one-half mile of said well, not to exceed 640 acres, for as long a period of time as lessee shall continue to operate such well or wells and produce from said well or wells oil or gas in commercial quantities each month.

Lessee shall promptly drill and complete an offset well for each well producing oil and/or gas in commercial quantities that shall be drilled at any point within 660 feet of any of the outer boundaries of the leased premises.

Lessee, concurrently with the commencement of the drilling of the first well, shall furnish bond with qualified corporate surety in the sum of $2,000, conditioned against the failure of lessee faithfully to carry out the terms, covenants and conditions of the lease.

Lease must be signed and returned to this office, with the first six months' rental, within 30 days of its receipt.

Write to, or make inquiry of the mineral department of this board, Room 124, State Capitol, concerning the status of the land desired, and for any further specific information. Application blanks will be furnished.

Prowers County

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, which had a show of oil at 3,954-61 feet and another at 4,019-33 feet, with small gas, in a geological section similar to the producing horizon in the Pennsylvanian lime, in Kansas, probably will be tested tomorrow. It ran the 4¾-inch with packer, through which 1,000 gallons of 50 per cent solution of acid was run. United Chemical Co., of Wichita, Kans., was in charge. The test

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is shut down temporarily awaiting the action of the acid. Activity in leasing and royalty buying continues with increased interest.

Adams County

Riddle Petroleum Co.'s No. 1 Baxter, C SW Section 2-3s-66, Derby district, is drilling water well at 400 feet and moving in boilers from the Byron Field in Wyoming. Sidney H. Keoughan is in charged of the drilling. It will be an 8,000-foot rotary test to the Dakota and possibly deeper.

Boulder County

Leslie R. Steele's No. 1 Cole, NW cor. NE Section 33-1n-70, Parallel Dome, is shut down at 3,520 feet and will be saved as a commercial gas well. It showed for about 1 bbl. of oil a day at present depth and no water. Formation is hard and oil may show an increase after standing. The well is only 1,000 feet southeast of the old Buffalo gas well which for many years supplied Boulder with natural gas until the casing rotted and hole caved in. Steele operates a small refinery near this well and obtains his crude from several wells in the old Boulder Field.

El Paso County

The Utemoor Syndicate's No. 2 Carson, NW NE NE Section 10-16-66, Fountain district, is drilling at 2,535 feet in black sand and shale.

Grand County

The two Grand County wildcats are both shut down and it is doubtful if either will resume before spring on account of severe winter weather in the district. The Interstate Oil & Refining Co.'s No. 1 Hinman, NE SE NW Section 11-2n-81, Dirt Creek, is standing at 1,997 feet, and the Colorado Oil Refining Co.'s No. 1 Linke, NE SW SW Section 13-1n-77, Granby district, is standing at 1,820 feet.

Moffat County

Stanolind Oil & Gas Co.'s No. 22-8D Shaw, NW SE NW Section 27-4n-92, Iles Dome, is rigging up rotary.

Montezuma County

Ambrose Oil Co., which operates in the Stoney Buttes Field in San Juan County, N. Mex., has taken over the Indian oil lease on Mancos Creek, in the Southern Utes Reservation, in Montezuma County, according to R. B. Ketner, an officer. There are 18 wells on the lease which produce 1 to 2 bbls. a day from the Mancos shale at around 400 feet. The crude is refined on the ground and sold locally. The new interests expect to drill additional wells. The producing wells are mostly in Sections 10 and 11-32n-18w.

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WYOMING

Albany County

The California Co.'s No. 1 Holst, NE SE SE Section 13-17-77, Quealy Dome, is rigging up to test a showing of oil in the Muddy sand. Total depth is 3,175 feet and the top of the Muddy was at 3,146 feet. Saturation was encountered at 3,166-70 feet and the 9⅝-inch is at 3,141 feet. The well will go to the Sundance unless test shows up better than present indications.

Carbon County

Earl W. Reeder, Inc.'s No. 1 Whitford, SW SE SE Section 24-20-84, Overland Dome, is drilling at 2,500 feet, and its No. 1 Union Pacific, C SW SW Section 19-20-83, is cleaning out at 5,800 feet, total depth. Ohio Oil Co. and the California Co.'s No. 1 Kyle, NE SE NE Section 26-21-79, Medicine Bow, is rigged and ready to spud in a test to the Sundance at 6,000 feet. It is a rotary operation and the Rocky Mountain Drilling Co. has the contract. The Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is coring at 4,650 feet.

Argo Oil Co.'s No. 1 Johnson-Union Pacific, NE cor. SE Section 5-24-87, O'Brien Springs, is coring in the third Wall Creek at 2,142 feet with cores showing good gas saturation. First Wall Creek was dry and the second Wall Creek showed oil and gas saturation. No test has been made.

Big Horn County

Peter Evanoff's No. 1 Griffin, Lot 60, Section 4-55-97, Garland district, which showed for 10,000,000 feet of gas a day in the Frontier at 1,665 feet and some oil at 995-1,030 feet, is shut down for orders. Ohio Oil Co.'s No. 1 Hoskins, SW cor. Section 14-56-97, is drilling at 500 feet, with the 12½-inch at 420 feet. Jerome Drunheller's No. 1 Martin, SW SE NE Section 17-49-91, is waiting after cementing the 6¼-inch at 1,210 feet.

Fremont County

Mid-American Oil Co.'s No. 2 Government, C NE SW Section 14-28-92, Sheep Creek, is drilling below 500 feet.

Hot Springs County

The California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh Dome, topped the Embar at 3,515 feet. The top of the Chugwater (red beds) was at 2,335 feet.

Park County

Garland Oil Co.'s No. 2 Government, SE NE NW Section 14-56-98, Garland district, was unable to free frozen pipe, skidded the rig 10 feet to the west and is spudding in new hole with cable tools.

Sweetwater County

Sinclair-Wyoming Oil Co.'s No. 76, SW cor. NW Section 11-26-90, Lost Soldier district, was completed at 390 feet and will be used as a key well to repressure producers in the Frontier. Gas has been turned into the hole at a pressure of 20 pounds to the square inch.

Weston County

Conway Oil Corp.'s No. 1 Government, C SE NW Section 7-41-60, Dewey district, is bottomed at 1,050 feet and underreaming the 10-inch.

Irene Eaton's No. 14, CSL NE SW Section 30-46-63, Osage Field, last reported drilling below 1,040 feet, went back and recemented the 8¼-inch at 460 feet. La Fleishe Oil Co.'s No. 18, C SW SW Section 17-46-63, is shut down below 300 feet, and Albert Jones' No. 8 Bock, SW cor. NE Section 21-46-63, is shut down at 180 feet. Western States Oil Co.'s No. 10 Bock, CWL SW NE Section 14-46-64, is running the 6⅝-inch to the top of the sand.

The wells on two 80-acre tracts in the Mule Creek Field in Niobrara County owned by the Egaso Operating Co., are being put on production, part of the output being mixed with Osage crude and refined by the Osage Refining Co., and part of it going for fuel.

MONTANA

Glacier County

With wells shutting down for the winter and only one new location reported, drilling in the Cut Bank Field is now down to 18 active operations. The Texas Co., which was the most active the past summer, is now completing the last two wells in its program.

R. C. Jeffries' No. 1 Lukens, C SE SE Section 1-33-6w, in the town of Cut Bank, which was reported a completion last week with 2,000 feet of oil in the hole, made a much better than average well when tested. It swabbed 328 bbls. the first 24 hours and pumped 175 bbls. the first day. Total depth is 2,981 feet.

Hannah-Porter Co.'s No. 2 Britton, SW NE NE Section 23-34-6w, which had only 300 feet of oil in the hole at 2,953 feet, total depth, was shot four times with 50 quarts each at 2,870-92 feet with no apparent improvement. It was then shot three times with 7 quarts and oil did not rise sufficiently to permit a swabbing test. It is being equipped for a pumping test.

Fist and others' No. 1 Harper, C NE NE Section 21-34-6w, which was reported a completion for 2 bbls. a day last week, has been plugged and abandoned.

The new location is Watson and others' No. 2 Simero, NW NW NE Section 1-33-6w, which is moving in materials. It is one-fourth of a mile northwest of its No. 1 Simero, which was reported dry and abandoned last week.

C. P. Castle's No. 1 State, SW cor. Section 36-35-6w, is drilling at 1,880 feet, and A. B. Cobb's No. 4 Walberger, SE cor. Section 35-35-6w, topped the Colorado at 435 feet, and cemented the 10¾-inch on bottom at 520 feet with 40 sacks. The Consolidated Gas Co.'s No. 1 Tribal, E NE NE Section 34-35-6w, is bottomed at 2,765 feet and trying to drill by tools, and its No. 2 Tribal, NE SE NE Section 34-35-6w, is drilling at 2,655 feet.

Indian Oil Co.'s No. 1 Reickhoff, SW SE Section 3-34-6w, is drilling at 2,785 feet.

Lawler & Hoer's No. 1 Clarkson, C SW SW Section 9-33-5w, cemented the 10¾-inch on bottom at 546 feet with 40 sacks.

Montana Headlight Oil Co.'s No. 4 Yunck, NW NW Section 1-34-6w, is drilling at 1,455 feet, and the Montana Power Gas Co.'s No. 1 State, C SW Section 16-33-5w, topped the Colorado at 545 feet, and is drilling at 625 feet.

Nadeau Brothers' No. 1 Farmers State Bank, C NW NE Section 17-33-5w, is drilling at 1,800 feet.

R. C. Tarrant's No. 2 Getty, NW cor. SE Section 2-34-6w, is shut down at 2,700 feet, and his No. 2 Haglund, Jr., C SW NE Section 13-34-5w, is fishing at 2,730 feet. His No. 3 Miller, E NE NE Section 24-34-6w, is drilling at 2,640 feet. The Texas Co.'s No. 2 Kneale, C SW NW Section 14-35-6w, is coring in sand at 2,900 feet and will be an early completion, and its No. 5 Purdy, E NW NW Section 35-35-6w, which had 2,500 feet of oil in the hole at 2,960 feet, is getting ready to pump.

Pondera County

A new operation in the Pondera Field is Conrad Refining Co.'s No. 2 Gjullin, NE SW Section 11-27-4w, which has rig on location.

Big Horn County

Enterprise Oil Co. and others' No. 2 Lynde, SW cor. SE Section 21-6s-35, Lodge Grass Creek, has drilled out 1,200 feet of cement to 3,618 feet. It lost circulation while trying to cement the 4½-inch at 3,605 feet.

Petroleum County

Guy Smith and others' No. 3, NE SE SW Section 33-14-26, Flatwillow district, is drilling at 1,312 feet.

Carbon County

Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7s-21, Dry Creek, which plugged back from 6,112 feet to the Da-

(Continued on Page 81)

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Casinghead and Natural Gasoline and Cost of Butane to Refiner

What, if any, is the difference between casinghead gasoline and natural gasoline? I have seen somewhere a formula for showing the cost of butane contained in natural gasoline to the refiner and wish you would give this to me if you have it.—A. C. H.

There was a short discussion of excess butane as purchased by refiners in the paper by R. C. Alden, presented before the eleventh annual convention, Natural Gasoline Association of America. The quotation following is from this paper:

"It can be mathematically demonstrated that natural gasoline butane purchased by refiners in excess of requirements and conceding the natural gasoline manufacturer a price schedule based on relative yields, costs the refiner the freight plus a processing charge for eliminating the excess butane. The formula expressing this relationship is as follows:

$$B = D + \frac{C}{E}, \text{ where}$$

B = cost, in cents per gallon, of excess butane purchased by refiner.
D = cost, in cents per gallon, freight or transportation between gasoline plant and refinery.
C = cost, in cents per gallon, of processing natural gasoline having excess butane at refinery.
E = excess of butane, in gallons, per gallon of natural gasoline receipts at refinery.

"The costs, C, above may be actual accounting charges, but usually are composed of such intangibles as greater handling costs due to larger receipts, cost of fractionation, increased load on vapor recovery system, increased loss of valuable components from gasoline storage, and increased cost of conservation of vapor losses. The refinery accounting system may show no charge for these items but there is nevertheless some cost involved in purchasing, receiving and eliminating the excess material.

"The magnitude of the processing charge in the preceding formula is shown in the following table:

COST, IN CENTS PER GALLON, OF EXCESS NATURAL GASOLINE BUTANE ATTRIBUTABLE TO PROCESSING AT REFINERIES

Excess butane in gals. per 100 gals. of receipts	Processing costs, in cents per gallon, of receipts of natural gasoline				
	0.10	0.25	0.50	0.75	1.00
5	2.00	5.00	10.00	15.00	20.00
10	1.00	2.50	5.00	7.50	10.00
15	0.67	1.67	3.33	5.00	6.67
20	0.50	1.25	2.50	3.75	5.00
25	0.40	1.00	2.00	3.00	4.00
30	0.33	0.83	1.67	2.50	3.33
40	0.25	0.63	1.25	1.88	2.50

"Even with such an extremely low processing cost as 0.10 cent per gallon of throughput, the processing cost assignable to excess butane can amount to 1 cent per gallon. With the freight cost added, the purchase of excess natural gasoline butane at refineries becomes an unaccountable luxury, particularly in these days when another dollar saved is a monument to someone's ingenuity. Excess butane at the refinery is seldom, if ever, worth more than the lowly commodity known as fuel oil. If refiners getting more butane than they require in natural gasoline, have these added costs to pay, the natural gasoline manufacturer will be penalized accordingly. Regardless of whether the requirements for butane content are high or low it is to the benefit of the natural gasoline industry to furnish the refiner with a grade of natural gasoline which needs no further processing at the refinery."

Reference—The Oil and Gas Journal, May 19, 1932, page 48.

U. S. Patent Must Show Complete Disclosure of Process

The News Edition, Industrial and Engineering Chemistry Vol. 12, page 343, September 20, 1934, publishes a statement, as per enclosed clipping, reporting a patent for a lubricant being held invalid because "deglycerolation did not appear on the face of the patent." Will you explain what this means?—H. B.

The report is:

"The patentees, Van Gundy and Scanlin, had produced a lubricant for high-speed bearings and subject to high temperatures. The patent, U. S. 1,599,854, stated that the "primary object was to provide a lubricating composition . . . free from any material quantity of water or moisture." The composition was made up essentially of soap of high melting point compounded with a hydrocarbon oil of high boiling point. It was produced by mixing an aqueous solution of caustic soda with tallow and heating "to produce saponification, after which the cylinder stock was added and the mixture heated to remove substantially all the water." The resulting product in the tabulated analysis had 4.76 per cent of glycerol and a melting point of approximately 450° F. The eight claims of the patent used the words "comprising" or "comprised," which are considered in patents as nonexcluding words. Of the patent in suit the court said that the intention of deglycerolation does not appear on the face of the patent. The product of the defendant had this constituent eliminated, whereas the patent specification nowhere mentioned the glycerol elimination."

The common method for making soaps is by the interaction of an alkaline solution and a fat or fatty oil. The alkaline substance is usually sodium hydroxide (caustic soda), as mentioned. The chemical change being represented by:

$$\underset{\text{caustic soda}}{3\,NaOH} + \underset{\text{fat}}{(C_nH_mCOO)_3C_3H_5} = \underset{\text{soap}}{3\,C_nH_mCOONa} + \underset{\text{glycerol}}{C_3H_5(OH)_3}$$

It was formerly the practice for the soap makers to leave the glycerol (glycerin) in the soap but now it is usually separated because of its value, about 10 cents a pound.

One of the fundamental requirements of patent law is that there shall be a full and complete disclosure of the process or the machine. The reason being that one experienced in the particular business will, according to the teachings of the patent, be successful in making the scheme work.

The patent in suit does not teach that the glycerol is removed. This is what is meant by deglycerolation. It appears that the patent was declared void because the claims were indistinct and there was insufficient disclosure.

Rumanian Exports of Oil and Petroleum Products

We wish to know the extent of the petroleum exports from Rumania, including crude oil and refined products and will appreciate the information if you have it.—M. H. F.

The latest report available is of July, 1934. The quantities are metric tons, 2,204.6 pounds, equivalent to 7.19 U. S. barrels; the money value par for lei is equivalent to $0.006, the present market value approximately 1 cent.

The quantities of petroleum products exported from Rumania during July were 616,327 tons, compared with 546,629 tons exported during the preceding month, and 505,256 tons in July, 1933. The shipments principally went to the following countries:

	Tons
Italy	110,672
Egypt	64,848
Great Britain	51,175
France	48,709
Germany	39,860
Belgium	37,031
Austria	36,467
Spain	27,513
Greece	19,270
Hungary	18,637
Holland	20,055
Turkey	19,802
Czecho-Slovakia	12,257
Sweden	11,774
Algeria	9,552
Yugo-Slavia	8,704
Bulgaria	5,452
Portugal	5,236
Other African	10,848
Other Asiatic	6,812

The month's exports were valued at 600,380,000 lei, and of the shipments 515,177 tons went from Constantza, and 83,559 tons from Giurgiu. The deliveries comprised the following: Crude oil, 2,382 tons; motor spirit, 176,200 tons; kerosene, 99,132 tons; gas oil, 92,562 tons; lubricating oil, 6,490 tons; and fuel oil, 215,324 tons. Thus, 3,676,210 tons of Rumanian oils have been exported in the eight months, compared with 3,398,922 tons in the same period of 1933.

Evolution of Sulphur Dioxide From Treated Distillates

What can be done to prevent the formation of sulphur dioxide during the distillation of light distillates following treatment with sulphuric acid? Any information and references will be appreciated.—T. J. B.

The treatment of a petroleum distillate with sulphuric acid frequently causes the formation of alkyl sulphides and mephates which are not easily removed by the ordinary washing operations. They may be removed by treatment with fuming sulphuric acid, but this is not advisable for distillates of the gasoline range because the desirable substances having an antiknock value are also reduced. It is better to avoid treating the light distillates with acid, unless the chemical structure is such that the acid is required.

The alkyl sulphides and sulphates remaining in an oil after acid treatment tend to decompose on standing, or even slight elevation of temperature, resulting in the formation of a yellow to brown color, the deposition of gum, and the development of acid. A distillate of this type will usually darken upon rerunning, and sulphur dioxide is evolved.

When oils of this character are acid treated the condition may in some instances be corrected by giving an alkaline and water wash before rerunning. In some refineries the doctor treatment is applied after acid treating and then repeated after the product is redistilled.

Where there is a special sulphur problem it is necessary that a thorough investigation be made by the chemists. The above remarks should be regarded as suggestions.

The following is quoted from Kalichevsky and Stagner, page 45:

"The amount of the neutral and acid esters can be greatly decreased in treatment by reducing the time of contact between the acid and the distillate, by using weaker acid, or by using lower temperatures. Any of these methods lessens the amount of SO_2 produced in the subsequent steam-distillation of cracked distillates and prevents corrosion of the stills and condensers. It is probable that the use of 'sludge treatments' or countercurrent treatments, in which the acid sludge comes in contact with fresh oil, is conducive to ester formation in the oil and, therefore, objectionable in this one respect. Nevertheless, the use of the sludge when it is fresh as a substitute for the first fraction of acid in the acid treatment is known to effect a saving in the amount of acid required.

"In the presence of sulphuric acid, some of the sulphur compounds in light oils have a tendency to condense with the unsaturated hydrocarbons, forming dye-like compounds. Thiophene and cyclopentadiene may thus form a red dye, while thiophene and cyclohexene may form a green one. All these dye-like substances, whatever their color in the free state, form an orange-yellow solution with sulphuric acid."

The Chemical Refining of Petroleum, by Kalichevsky and Stagner, contains a discussion of sulphur compounds. Numerous references are mentioned.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Conditions in This Case Seem to Favor Drilling a Test Well

My father and I own a 40-acre lease and we have had many discussions over the question of drilling another well on it. The location of this well, if drilled, would be about 400 feet from two wells to the east and equidistant from them. Lines drawn from the proposed location to these wells on the east would form two sides of a triangle. About 1,000 feet to the northwest, on an adjoining lease close to the corner of our 40 acres is another well. The two wells to the east each had an initial production seven years ago of 75 to 100 bbls. a day and the one to the northwest of about 20 bbls. The three now average 2 to 4 bbls. each. We have had a vacuum on the two wells to the east for a year, pulling 15 points. It helped production very little, but increased the gas, which is used as fuel to run the engine. We are getting an estimated 4,000 feet of gas daily. The wells are producing from the 1,800-foot sand, which averages about 8 feet in thickness. The sand is very loose, and during a repressuring program a few years ago the sand apparently channeled, or bypassed, with little input pressure and responded readily for a time, but the gas-oil ratio soon became so high it was impossible to recycle the gas. My argument concerning the drilling of an additional well is that the two wells producing near the proposed location are so small we could not expect to get a profitable well. If they were making 15 or 20 bbls. I would favor the plan. It seems to me evident that the area has been drained, especially since we are pulling 15 points vacuum. We recently removed the vacuum for a few days and kept one pound pressure on the casinghead. The wells dried up immediately and never produced a barrel until the vacuum was replaced. My father's argument is that you have to drill every location to get all the oil; that the two wells to the east do not drain the oil from a location 400 feet away.—A. T. W.

You do not tell definitely the location of this property. It is necessary therefore to assume many things which might have been checked if the exact location of the lease were given.

You are producing from an 8-foot sand stratum about 1,800 feet deep. The two wells on this 40 acres and the well on the adjecent lease to the northwest indicate the oil sand extends in a northwest direction across your property.

The fact that gas by-passed when you attempted to repressure offers no basis on which you can judge the likelihood of a new well to produce.

The Oil and Gas Journal during the last year has carried numerous articles regarding old production in Eastern and Mid-Continent fields. In the Bradford Field of Pennsylvania the operators have been flooding the sands, driving the oil ahead of the water, and have found there are certain horizons in the sand much more porous and permeable than others.

A case in point was the discovery early in the flooding life of one lease where the water quickly made its way across the property from the input to the output wells but did not deliver any oil ahead of the water. Investigation later developed that this water had channeled through the upper portion of the formation which had contained gas when the field was undeveloped. This section being much more permeable than the section below containing the oil, the water took the path of least resistance and flowed from input to output wells through this upper stratum.

It is suggested that you drill a well at the proposed location, or still better, 400 feet due west of your southerly well and leave yourself a position for other wells to be drilled if this first well proves productive.

If you drill this well, take every precaution to get the best cores possible of the section penetrated. Have these cores carefully examined in a laboratory where they can report on permeability, porosity and saturation and reconstruct for you the underground conditions so you may know how to proceed best.

Having determined the stratigraphy of the formation from which you expect to get your production, you are then in a position to set packers or liners in the well so you can direct the path of movement of any repressuring medium selected. This general practice has been adapted to wells and leases in Pennsylvania fields with success and there is no apparent reason why it cannot be applied successfully to your property.

If you will think of this sand as a layer cake with chocolate icing between the layers, corresponding to impervious streaks between the sands, you can get an idea of the approximate condition of the formation on your lease. However, the sand layers are not uniform in any of their characteristics and you are in error if you assume that data obtained from producing the original wells, treating the whole sand as one body, can be applied to the question of drilling other wells. It is not going to cost a great deal to drill another well and if you will get a complete log of this hole and core wherever there are any indications of oil or gas you will acquire sufficient information to justify the expenditure of the money, even though you should get only a small well or even a dry hole.

You might check the economic phase by totaling the production these wells have made to date. A barrel of oil occupies approximately 5.6 cubic feet of space. The formation is stated to be 8 feet thick. If it is all sand with 25 per cent pore space and 90 per cent saturated there could have been approximately 78,408 cubic feet of oil per acre in the reservoir originally.

If only one-half of the 8-foot stratum is made of good sand as assumed here, then the oil contents per acre would be reduced to 39,204 cubic feet.

It is not a difficult problem to check back and determine how many acres have been drained to date by the wells completed. It may be assumed that this oil has been evenly distributed around these wells and after the area of the original reservoir is determined the radius of drainage for the oil recovered can be established.

This being done it can be further checked to determine the radius around the wells that has been drained if the sand is only 25, 35, 40 or even 50 per cent depleted. An acre equals a square whose side is 208.71 feet and each acre would contain 348,480 cubic feet.

It is suggested the test be located so as to permit other locations to be spaced equidistant along the south and west margin of the lease and thus recover as much of the remaining oil as possible.

Why Was It Called That?

WATER HAMMER

When flow of water in a pipe is arrested suddenly, as by the closing of a faucet, called water hammer, there often is a shock that shakes the pipe and produces a clanking noise. The term is used principally in connection with steam piping, where condensed steam (water) is forced ahead by the steam rushing into a cold empty pipe with high velocity, slamming the water against bends, elbows and valves with terrific force. This water hammer effect is particularly violent when steam is admitted suddenly into a cold empty pipe from which a portion of the air has been removed by the preceding flow of water through it. Under this condition there is no air against which the rushing water can cushion and the effect is destructive to pipe and fittings. Surge chambers are used on pumps along oil pipe lines to provide a means of cushioning entrained gas or air flowing through the pipe with the oil.

How Temperature and Pressure Figure in Production of Oil

I am not clear about the way gas is found mixed with oil underground. Is gas ever found in a formation that does not also contain petroleum? When gas is present in the oil underground just what happens when the two are brought to the surface? How do temperature and pressure figure in this phase of oil production?—E. T. R.

Under ordinary conditions gas is found associated with oil in an oil-bearing formation. In the process of taking these two substances to the surface the pressure to which they are subjected in their virgin state in the formation is reduced to atmospheric pressure, which results in vaporization of the gas associated with the oil. The properties of the liquid that remains undergo a change as a consequence of the removal of this gas.

The general subject covered by your questions was discussed by D. L. Katz, of the Phillips Petroleum Co.'s research department, in a paper before the American Institute of Mining and Metallurgical Engineers on "Effect of Gas Liberation Upon the Properties of Crude Oil." He said:

"Gas may occur in a formation that does not contain crude oil, it may occur just above and in contact with the crude, and it may be present in the liquid crude. The presence of these gaseous constituents in the liquid crude contributes properties to the mixture that facilitate the movement of oil in the formation. Therefore, the liberation of this gas from the crude due to a reduction in formation pressure bears a direct relation to oil production.

"Crude oil occurs in the earth's surface at depths varying from outcrops to many thousands of feet. The temperatures and pressures at which the oil occurs vary with the depth and location, and in general the deeper the formation the higher the temperature and pressure. The temperatures are in the range of 80° to 200° F. and the pressures vary from a few pounds to above 3,000 pounds.

"These pressures and temperatures of the oil-bearing formation allow rather high concentrations of the gaseous constituents to be present in the reservoir crude. The apparent properties of the gaseous constituents when present in the liquid crude are vastly different from those of the constituents present under atmospheric pressure. For instance, methane in the liquid crude has apparent properties which are at variance with those of gasoline more than the properties of gasoline differ from those of lubricating oil. Thus at high pressures with high concentrations of the gaseous constituents crude oil will be of a nature different from that of produced crude oil at atmospheric pressure.

"The fact that crude oils are found under high pressure does not mean that the crude oil contains a sufficient amount of gaseous constituents to exert a pressure equal to the formation pressure. If the crude gives off gas when the pressure is lowered an infinitesimal amount from the formation pressure at the formation temperature, the crude is said to be saturated with gas. If the crude will not give off any gas until the pressure is lowered a finite degree below the formation pressure, the crude is said to be unsaturated with gas. Only pressure changes that allow gas to leave the liquid crude are vital to the oil's properties."

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NATURAL GAS DEVELOPMENTS

New York-Pennsylvania Gas District Operations

COUDERSPORT, Pa., Dec. 3.—Two producers, one gauged at 19,750,000 feet, and the other at 2,250,000 feet, featured North Central Pennsylvania and South Central New York gas belt operations. The first was Stocum and others' J. W. Wells, Allegany Township, Potter County, drilled to 5,216 feet, and the second was East Penn Development Co.'s Roscoe Kemp, at 4,026½ feet in Farmington Township, Tioga County. There were no completions in New York State.

East Penn Development Co. was drilling at 3,900 feet on the Presbyterian Church test, Farmington Township, Tioga County, and E. Cabot was down 4,155 feet on the W. F. Burroughs farm, Gaines Township, same county.

Cunningham Natural Gas Co. was still shut down at 4,507 feet on the George Carroll farm, Oswayo Township, Potter County. P. P. & L. was drilling at 5,605 feet on the Clair Doty property, Hector Township, same county. Electro-Geometer was running pipe at 5,184 feet on the Katherine Currie well, Allegany Township, same county. On the Chloe Kenyon farm, Hebron Township, same county, P. P. & L. was drilling at 4,925 feet.

Other operations in the Hebron area in Potter County were: Penn United, shut down at 4,877 feet after casing at 4,874 feet on the Burt & Lyman farm, where a strong show of 250,000 feet was encountered. Lycoming was drilling at 2,900 feet on the W. B. Hemphill farm, at 4,270 feet on the W. White farm, at 5,045 feet on the O. W. Greenman farm, and at 4,420 feet on the R. and G. Carmer farm. In the same township, Potter Development Co. was still idle at its No. 2 Penn Stave location, and was drilling at 4,110 feet on its B. L. Langworthy. Sylvania was drilling at 3,400 feet on its No. 2 John Higley.

In Genesee Township, Potter County, Bayliss was drilling at 4,145 feet on the Earl Pye farm. United Producers was still shut down on the J. Ruppert location in Hebron Township, same county. J. B. Reed is moving in on the George Page farm, Allegany Township, same county. Tioga Natural Gas is drilling by tools after a difficult fishing job at 4,620 feet on its No. 1 Emporium Bank, Shippen Township, Cameron County, and is still shut down at 4,470 feet on its No. 2 Emporium Bank, same township. Electro-Geometer made a location on the Armstrong Forrest Co. property, Norwich Township, McKean County.

New York Operations

Little of interest is noted in the gas activities for the week in New York State. Empire Gas & Fuel Co. was drilling at 3,500 feet on the Dean estate property, Alma Township, Allegany County. Higgins and others was down 1,725 feet on the Steadman farm, Allen Township, same county. Farnman and others were drilling at 1,169 feet on the Murray estate test, Belfast Township, same county. Tri State Gas Co. was drilling at 2,772 feet on the N. D. White farm, Bath Township, Steuben County, in sandy formation. Belmont Quadrangle Development Co. was drilling at 1,267 feet on the T. H. Wing farm, Greenwood Township, same county. Harry Erwin was building a rig on the Ed Fisk farm, Thurston Township, same county.

Finance Oil & Gas Co. was shut down at 150 feet on the John Inman farm, Persia Township, Cattaraugus County. A. B. Dutton was drilling at 810 feet on the Earl Dadson farm, Junius Township, Seneca County. Cunningham Natural Gas Co. was moving in on the Maxwell farm, Willing Township, Allegany County.

Ratable Taking Measure Planned for Panhandle

AUSTIN, Tex., Dec. 3.—Senator Clint C. Small, Amarillo, has announced he will introduce a bill at the regular session of the legislature in January requiring ratable taking of gas, as a check on gas wastage in the Panhandle. The wastage is estimated at 1,000,000,000 feet daily, at which rate the field before long will be exhausted, the senator said.

"This huge waste of a great natural resource could be stopped overnight," he said, "if we had a ratable taking law and a fair price paid by companies to land owners for their gas. The land or well owner is getting but 2 cents per 1,000 feet, and at such a low price, no wonder there is great wastage. Evidently it has no value in this state, until it is sold to the consumer in other states as well as in Texas.

"I am confident that the legislature will pass the bill and that it will stand up in the courts. Because much gas is moved in interstate commerce, most of it going by pipe lines, I doubt if the state can compel the pipe lines to pay a production tax, which the landowner is now paying.

"The companies, some of them, have their own wells, for which reason at present they buy as little as they can from the landowners."

At every regular session of the legislature, and at some of the special sessions, there is a bill to increase the tax on natural gas. In the Forty-first there was a bill to make the tax 4 cents per 1,000 feet, but well owners from various sections protested this was twice as much as they were receiving for the gas.

After hearing this protest some members insisted the 4 cents tax should be charged anyway, and that the well owners could collect from the companies. Then the land, or well owners, inquired of these legislators under what procedure collection could be made when all of them were under contract to sell gas at 2 cents.

A previous ratable taking law, applying to gas, was knocked out in the courts, but Small expects to get around the difficulty in his new bill. Oil production is subject to both ratable taking and market demand laws.

A score or more plants daily are converting 500,000,000 feet of Panhandle gas into between 600,000 and 1,000,000 pounds of carbon black. The year's harvest of carbon black, on the basis of current rate of consumption, will exhaust 171,000,000 feet of gas and manufacture from 200,000,000 to 300,000,000 pounds of carbon black that is going to market for 4 or 5 cents a pound and return a total revenue of $8,00,000 to $12,000,000. Current price estimates are used and operators estimate a yield of from 1 to 2 pounds from 1,000 feet of gas.

CARBON PLANT HEARING

AUSTIN, Tex., Dec. 3.—The Railroad Commission has ordered that notice be given that the application of Western Carbon Co. for renewal of permit to maintain and operate its plant for the burning of residue casinghead gas to obtain the carbon black content, the plant being known as the Airolene plant in Wheeler County, will be heard at Austin, December 3.

St. Louis Rate Reduced by the State Commission

JEFFERSON CITY, Mo., Dec. 3.—A reduction in domestic and commercial gas rates in St. Louis amounting to about $348,000 annually has been ordered by the Missouri Public Service Commission in deciding a seven year old valuation case of the Laclede Gas Light Co.

The commission fixed the valuation of the company at $39,000,000, cutting more than $8,000,000 from the $47,500,000 upon which present rate schedules are based. The company will be allowed an income of 6½ per cent annually plus an allowance of $500,000 annually for depreciation, making the total collections about $3,035,000.

Company officials had sought a valuation of about $60,000,000, with a rate of return upon that figure of 8 per cent. No going value was allowed, although the company sought to include $5,000,000 in its valuation as "going value."

The case decided was started in April, 1927, and was before the Missouri Supreme Court at one time for a decision on a valuation fixed in 1929. The city was not satisfied with the rates ordered by the commission at that time and took the proceedings into the courts, the court ordering the commission to rehear the case. Most of the reduction in valuation came on property owned by the gas company, but not used in distribution of its product to the consumers in St. Louis.

The commission refused to allow a charge of $45,000 against the operating revenues of the company for engineering services performed by appraisal companies for the company in the valuation case.

"The work done by the two engineering firms in appraising the property inventoried by the commission was very similar and resulted in practically the same figures for reproduction costs," said the commission. "It is quite obvious that one was a duplicate of the other and it appears to us that the only possible reason for having both firms make appraisals is to give greater weight to the company's figures, should the commission give equal weight to all the appraisals before it. That is not the method which we use to determine value, i.e., adding four appraisals and dividing by four."

In specifying that the rate reductions should be applied to domestic and commercial consumers, the commission pointed out that industrial and heating rates were proportional and based on competition and for that reason none of the savings should be applied to those classifications.

Payment of fees to the Management & Engineering Corp., a holding company, for management and engineering services was disallowed, the commission ruling that the charges were "unverifiable." An item of $7,000 made up of dues and donations also was eliminated, the order setting out that such dues and donations should not be listed against operating expenses.

In arriving at the valuation the commission made allowances for future demands on the company by leaving in the figures the property which would carry the gas load should consumer demand expand in the next few years.

The ruling of the commission was unanimous. It becomes effective December 15, with a requirement that the new rate schedule be filed by January 15 to go into effect February 1.

KINGSVILLE ASKS CUT

AUSTIN, Tex., Dec. 3.—A reduction in the gas rate of Kingsville has been asked from the gas utilities division of the Railroad Commission by Mayor J. C. Nolan and City Commissioners Al Kleberg and C. O. Hollingsworth and City Engineer R. L. Peurifoy of Kingsville. The present minimum rate is $1.25 per 1,000 feet.

Reduction Is Restrained by Temporary Injunction

AUSTIN, Tex., Dec. 3.—Hearing on a temporary injunction to enjoin the Texas Railroad Commission from enforcing an order requiring the Public Service Co. to charge 27 cents per 1,000 feet at gate in Spearman, Tex., was set for hearing in the Fifty-third District Court on December 10 at 10 a.m. after Judge Charles A. Wheeler had granted the company, located at Fort Worth, its application to restrain the commission from interfering with its present rate.

The Public Service Co. supplies natural gas to the Texas towns of Canadian, Booker, Perrytown, Wakar, Farnsworth, Glazier and Higgins and to the Oklahoma towns of Shattuck, Gage and Fargo. It distributes wholesale natural gas through gates at Spearman for Texas and at Supply, Okla., for Oklahoma towns, from its properties in Wheeler County, Texas. Customers of towns on the system are charged at a rate of 60 cents per 1,000 feet. The company contended that a reduction of the rate to 27 cents would mean it would have to lower the burner tip rate in the towns to less than 60 cents, a rate which the company contends is discriminatory between its customers in Texas and Oklahoma.

Making Plans for 1935 Gas Measurement Course

The annual reorganization meeting of the general committee for the Southwestern Gas Measurement Short Course was held in the Oklahoma Utilities Association offices in Oklahoma City, Okla., November 19, with D. C. Williams of Ponca City, Okla., general chairman, in charge.

New members of the committee for the 1935 short course are B. P. Stockwell, of the Corporation Commission, Oklahoma City; William F. Lowe, of Tulsa, secretary of Natural Gasoline Association of America; J. H. Satterwhite, Tulsa, American Meter Co.; and Earl Kightlinger, Shreveport, La., Arkansas Natural Gas Corp.

Chairmen of subcommittees are the following: Banquet, entertainment and arrangements, W. H. Carson, Norman; program, R. D. Turner, Tulsa; exhibits, G. W. McCollough, Bartlesville; registration, E. F. McKay, Oklahoma City; study of practical methods, Ray Roundtree, Houston, Tex., and publications, Max Watson, Amarillo, Tex.

The general committee will hold a meeting in January to decide dates for the 1935 course, to be held, as usual, at the University of Oklahoma, Norman.

Early Hearing Granted in Lone Star Rate Case

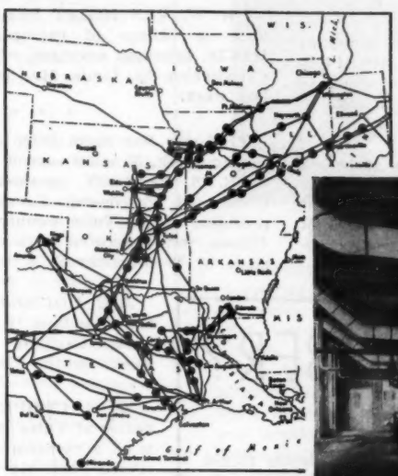
AUSTIN, Tex., Dec. 3.—The Third Court of Civil Appeals has granted a motion by the State to advance for early hearing an appeal in the Lone Star Gas Co. rate litigation.

The appeal was made by the State. The litigation arose when the Texas Railroad Commission issued an order directing that the Lone Star Gas Co. lower its rates for natural gas in some 200 North Texas towns and cities. The order was attacked by the gas company. A Travis County trial court held for the company.

56...

McINTOSH & SEYMOUR

DIESELS for ONE Oil Company

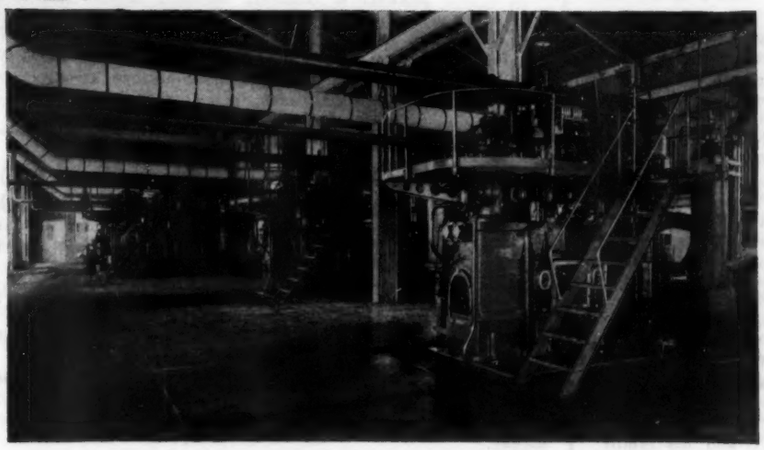


● Each dot marks from 1 to 7 M-S DIESELS—a total of 225 Engines—for main and gathering line pumping, and refinery operation.

Of this total for

TEXAS PIPE LINE COMPANY

50 M-S Diesels are stationary, 6 marine. Two each of 4 cyl, 400 hp and 200 hp are part of one order for 12.



ENGINES now 15 years old and still "going strong" in Oil Field service speak more for the stamina and economy than pictures or promises. For Oil Field power sets up a hardy task, wherein M-S Diesels are noted for high performance, and never a failure. But our oil field power engineers, being practical oil men, have gone many steps farther—coordinated Diesel reliability with pumps.

With the logical turn from plunger pump to centrifugal type, we have perfected a Complete Pumping Unit—a compact, enclosed, self-contained Diesel engine with pump and gears, with rugged welded sub-frame, yet portable with ordinary handling equipment.

We should be glad to give you full details on Diesel-Centrifugal Pumping or any other Oil Field Diesel power equipment.

M-S Diesels comprise 35 standard units ranging from 120 to 1600 hp with pump capacities up to 80,000 bbls. Ask for Bulletin 151.

McINTOSH & SEYMOUR CORPORATION

(DIVISION OF AMERICAN LOCOMOTIVE COMPANY)

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NEW YORK, N. Y., 30 Church St. BOSTON, MASS., 30 Newbury St. CHICAGO, ILL., McCormick Bldg.
WASHINGTON, D. C., Barr Bldg. HOUSTON, TEXAS, Esperson Bldg.
KANSAS CITY, MO., Commerce Trust Bldg. SAN FRANCISCO, CAL., Bourn Bldg.

PERSONAL PARAGRAPHS

TOM D. PHILLIPS, secretary of the National Drilling Association, has gone to Washington, D. C., to attend a drilling code conference.

• • •

W. E. MINTER, treasurer and general manager of the Conway Oil Company, recently moved to Newcastle, Wyo., from Charleston, W. Va.

• • •

J. M. McINTIRE, vice president and general manager of the New York Oil Company, left Casper, Wyo., for Chicago on company business.

• • •

KENNETH BAUMGARNER, of Wichita, and JOHN PARKER, of Great Bend, scouts in Kansas for the Gypsy Oil Company, were visitors in Tulsa last week.

• • •

K. R. KINGSBURY, president of the Standard Oil Company of California, with MRS. KINGSBURY, arrived in New York last week on the Rex of the Italian line from a trip to European points.

• • •

SAM MESSER, president of the Quaker State Oil Refining Company, and vice president of the James B. Berrys Sons Company of Oil City, Pa., was married 10 days ago to JUDITH HARVEY WHITE of Columbus, Ohio.

• • •

H. C. B. BROWN, general manager of the Tucuyo Oilfields of Venezuela, is visiting in London, England.

• • •

C. F. GARDNER and F. H. MATTERN, of Tulsa, and T. J. MOORE, Dallas, Tex., of the Simms Oil Company, visited in Ada, Okla., last week.

• • •

RAY M. COLLINS, representative of the Oklahoma Production Committee, has gone to Washington, D. C., where he will remain on oil business for several days.

• • •

NOAH ANDREWS and his family, of Mount Pleasant, Mich., spent Thanksgiving with relatives in Logan, Ohio, taking with him a big buck deer for a venison party.

• • •

A. J. MAIR and J. G. LAWRENCE, of the International Petroleum Company, Ltd., left New York City, Saturday, December 1, on the Grace liner, Santa Elisa, for Talara, Peru.

• • •

A. C. SAUL, of the Shell Oil Company of California, San Francisco, was a passenger on the LaFayette of the French line, which left New York, December 1, for Plymouth, England.

• • •

RALPH E. FAIR, vice president of the Lucey Petroleum Company, Dallas, Tex., has just returned from a trip to Europe, spending considerable time in Rumania where he has interests.

• • •

BILL LANE, of Lane-Wells Company, Los Angeles, Calif., was critically injured when returning to California by automobile from a trip to the Mid-Continent. He is at the Hotel Dien at El Paso, Tex.

• • •

JAMES H. GARDNER, president of the Gardner Petroleum Company, a charter member of the American Association of Petroleum Geologists, and a fellow of the Geological Society of America, addressed the Tulsa Geological Society on "Origin and Development of Limestone Caverns."

E. L. DECKER, of the Martin-Decker Corporation, accompanied by his wife, is visiting friends and relatives in Tulsa.

• • •

C. R. HETZLER, vice president and general manager of the Mountain Fuel Supply Company, was re-elected president of the Rock Springs Golf and Country Club.

• • •

LEE TEUTSCH, recently transferred from Gladewater, in the East Texas Field, to Fort Worth, Tex., by the Atlas Supply Company, has been appointed credit manager of that company, with headquarters in the latter city.

• • •

ORVILLE HARDEN, director of the Standard Oil Company (New Jersey), and D. L. HARPER, of the company's export department, returned to the New York offices last week from a visit to Italy and other European points.

• • •

MAURICE MEISSE, formerly in the geological department of Phillips Petroleum Company, has been transferred to the land department as scout with headquarters at Ada, Okla. B. B. GEIGER is now scouting, with headquarters at Breckenridge, Central Texas.

W. O. WOOD, of Lincoln, Neb., salesman for the Pittsburgh Equitable Meter Company, was in Casper, Wyo., last week.

• • •

C. T. WHIPPLE, garage superintendent for the Mid-Continent Petroleum Corporation, Tulsa, is confined to his home, seriously ill of heart disease.

• • •

W. H. LOVESY, of the Utah Oil Refining Company, has returned to Salt Lake City, Utah, after inspecting the company's properties on Black Mountain Dome near Thermopolis, Wyo.

• • •

DR. W. VAN HOLST PELLEKAAN, vice president in charge of exploration, and ROBERT DAVIS, principal assistant, of the Shell Petroleum Corporation, St. Louis, Mo., were visitors in Tulsa last week.

• • •

THE new Boy Scout lodge at Camp Garland, on Spring Creek, 55 miles east of Tulsa, was dedicated to R. S. ELLISON, president of the Stanolind Crude Oil Purchasing Company, Tulsa, who is president of the Tulsa County Scout Council. Mr. Ellison was presented with a plaster cast mask made by Scoutmaster E. J. Uhl.

• • •

JOE HOLMES, chief engineer for the Standard Oil Company of Venezuela, Caripito, is spending several weeks in the United States.

• • •

W. G. CHERRY, geologist and operator of Tulsa, with MRS. CHERRY, is on a vacation in Mexico. They will return home via California.

• • •

GEORGE CALVERT, operator, of Fort Worth, Tex., has gone to Washington, D. C., to attend the funeral of his mother, MRS. GEORGE H. CALVERT.

• • •

J. B. GRAHAM, manager of field service of the National Tube Company at Pittsburgh, Pa., has returned home after spending a fortnight in the Mid-Continent.

• • •

LEE ROBISON, director of public relations of Indian Territory Illuminating Oil Company, has been made president of the Bartlesville Welfare Association.

• • •

P. W. MORRISON, chemist for the Chemical Process Company, has been transferred to Big Spring, Tex., to take charge of a new laboratory opened there by the company.

• • •

ENOCH MIFFLIN, of the Union Gas Company staff at Chatham, Ontario, was injured recently through a fall from a ladder while loading an oil tank in the Dawn Field.

• • •

E. W. HAMMOND, drilling contractor, who was burned in an explosion of a boiler at a well near Richmond, in South Texas, recently, is reported slowly recovering in a Houston hospital.

• • •

JOHN SIMPSON, with Imperial Oil Refineries, Ltd., at Sarnia, Ontario, for the past three years, left recently via New York for Talara, Peru, on a three-year contract with the International Petroleum Company. He will be on the refinery staff at Talara.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

December 6, 1909

Kansas Natural Gas Co. officials fear that Kansas gas fields are exhausted and that Kansas cities will have to turn to Oklahoma for their supply.

Coalinga, with 43,500 bbls. per day, is the largest producing field in California. Kern River follows with 41,000 bbls. and the whole State 163,500 bbls.

Henry Clay Pierce, chairman of the Waters Pierce Oil Co., was found not guilty of perjury and false swearing, brought by Texas state authorities. Trust-busting politicians in Texas have brought about the forfeiture of the Waters Pierce company's permit to do business in the State and succeeded in soaking that company a fine of $1,800,000.

20 Years Ago

December 3, 1914

Contractor Tom Flaherty, having no natural gas available, uses gasoline in a gas engine to drill a well in the Bradford Field, and it was successful. His fuel bill was $3.25 per day at 11 cents per gallon.

The Illinois Pipe Line Co. was incorporated in Ohio with capital stock of $20,000,000. Incorporators are George P. Jones and W. E. Badger of Findlay; Ward A. Miller of Lima, and J. R. Penn, Jr., and Daniel Roach who will operate in Illinois for the Ohio Oil Co.

Capt. J. F. Lucey, who has been in Europe for several months representing his company in the oil fields, has gone to Belgium to aid the American Relief Committee in the distribution of food and supplies to war victims.

Lewis J. Levick, president of the Crew-Levick Co., dies in Philadelphia, Pa.

P. J. White and H. F. Sinclair have returned from London where they negotiated with the Royal Dutch-Shell officials for the laying of an 8-inch pipe line from the Cushing Field in Oklahoma to Beaumont, Tex. It is said that all financial arrangements were concluded and that the preliminary work of building the line will be commenced at once.

10 Years Ago

December 4, 1924

Statistics show that one-tenth of the wells in the United States produce 67 per cent of the daily crude oil output. A total of 236,500 wells produce an average of four-fifths of 1 bbl. per day.

The Wortham Pool in Freestone County was opened on Thanksgiving Day with an initial production of 8,000 bbls. per day. The Boyd Oil Co. (Humphreys, Fohs and others) opened the pool on Julius Fohs' geology.

Earl Oliver, a director in the Marland Oil Co., in general charge of economics, resigns his connections with the Marland organization. He was also vice president and general manager of the Marland Oil Co. of Mexico.

M. J. Kirwan resigns as superintendent of the Bartlesville Station of the U. S. Bureau of Mines.

H. FOSTER BAIN will sail about the middle of December on a journey of observation to Australia and New Zealand.

* * *

MISS BERYL MAUPIN, secretary to R. E. SHUTT, head of the geological department of the Kansas-Oklahoma-Panhandle division of Shell Petroleum Corporation, is on a vacation trip to Southwest Texas and also to Mexico.

* * *

FRANK H. DUNN, vice president, and W. J. MORRISON, production superintendent, of the H. F. Wilcox Oil & Gas Company, visited the company's properties in the Pampa area, Texas Panhandle, and at Bristow, Okla., recently.

* * *

JOHN BORDEN, president, and GUILFORD S. TURNER, sales manager, of the Old Dutch Refining Company, of Muskegon, Mich., attended a hearing in Grand Rapids, Mich., on alleged violation of the petroleum code in the Muskegon service station price war.

* * *

GUY E. CHAPMAN, of the McClanahan Oil Company, Mount Pleasant, Mich., was one of several Central Michigan oil operators who bagged a buck deer during the annual Michigan deer season. He got his on the Boutell ranch in Ogemaw Township and county where his company recently completed a dry hole.

* * *

R. C. CATHCART, who has been assistant sales manager of the Texas Company of California with headquarters in Los Angeles, has been transferred to the New York offices of the company where he will be superintendent of service stations, domestic division. With MRS. CATHCART he arrived in New York last week.

* * *

B. L. LIGON, sales manager of the Wilson Manufacturing Company of Wichita Falls, Tex., spent a day or two in the Tulsa territory last week.

* * *

RICHARD P. ABELE, vice president and director of the Sunray Oil Company, has resigned to become an individual oil operator on January 1.

* * *

R. D. (DICK) ROBEY, JR., vice president of the Olson Oil Company, spent several days in the Haury sector of Reno County, Kansas, last week.

* * *

K. A. COVELL, engineer, production department Pure Oil Company, Chicago, spent several days at the company properties in Michigan oil fields last week.

* * *

O. P. HOOD has been appointed representative of the U. S. Bureau of Mines on the Standards Council of the American Standards Association, with A. C. FIELDNER as alternate.

* * *

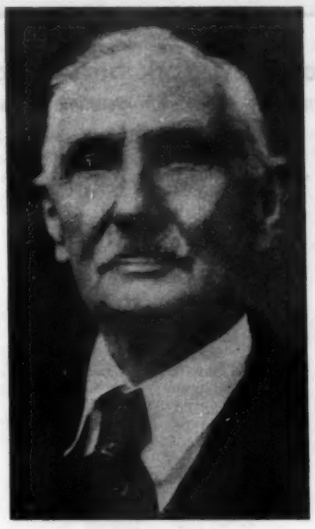
ROY A. REYNOLDS, geologist, of Fort Worth, Tex., has left with a group of 10 Oklahoma City oil men for a three weeks' hunting trip in Mexico. The party will camp about 500 miles south of Mexico City to hunt tapir, jaguar, bear, deer and other game. On the return trip the party will stop in northern Mexico to hunt quail, wild turkey and other fowl.

* * *

HERBERT MUELLER has been named chief clerk of the well log division of the proration department, Oklahoma State Corporation Commission. He succeeds MRS. E. D. HICKS, JR., resigned. MISS JESSYE ARNETT, stenographer for JUDGE OREL BUSBY, has been named court reporter for the department, succeeding GEORGE WARR, resigned. MISS RUTH NEWTON has been appointed stenographer in the Tulsa proration office to succeed MRS. DOROTHY YOUNG, effective December 1.

Petrolia Veteran Is Active at 90

On August 12, 1934, John Scott, inspector of oil and gas wells for Ontario and one of the few survivors of the early Petrolia oil boom, celebrated his ninetieth birthday.



JOHN SCOTT

Born near Kingston, Ontario, Mr. Scott spent his boyhood on a "bush farm." At 14 adventure beckoned, and with two pence in his pocket he ran away from home to ship as cabin boy on the Great Lakes barque "Admiral." For many years he sailed the Great Lakes. In the early sixties, in Chicago, he was offered $1,000 to substitute for a draftee in the American Civil War, but though he accepted gladly, he was turned back as too young.

In 1871 stories of the Petrolia boom attracted him to the Canadian oil metropolis. He became a driller and ever since then has been intimately associated with the industry.

His first well, drilled in 1872, on the Englehart property, is still producing. Among the more sensational producers drilled by Mr. Scott in those early boom years was the "Deluge" gusher which for weeks produced 600 barrels a day.

Twenty-five years ago, at an age when most men begin to think of retiring, Mr. Scott was appointed provincial inspector of oil and gas wells. He still discharges the duties of that office. With his lithe figure and springy step, he can still, on his tours of inspection, outwalk younger men.

In his earlier days Mr. Scott was active in Petrolia municipal affairs; and—stimulated perhaps by recollection of boom conditions when drinking water commanded a higher price than crude oil—he was largely instrumental in getting for the town an up-to-date waterworks system.

W. J. CRITES, production engineer of the Phillips Petroleum Company of Bartlesville, Okla., is making a trip through Texas oil fields.

* * *

W. K. KIRBY, consulting petroleum engineer, of San Antonio, Tex., has returned from Italy where he was engaged during the past year in consulting work on a proposed refinery and pipe line in Sicily.

* * *

MISS RUTH CASSITY, secretary to OFFICE MANAGER FLAHERTY, of the Shell Petroleum Corporation, Tulsa, and also secretary of the Shell Employes Association, is visiting relatives in Dallas, Tex., on her annual vacation.

* * *

DR. GEORGE C. BRANNER, state geologist of Arkansas, announces that LIEUT. A. C. THORSON, in charge of a party of 65 men for the U. S. Coast and Geodetic Survey, has established headquarters at Little Rock, and will run about 5,000 miles of levels in Arkansas, eastern Oklahoma and southern Missouri.

* * *

O. T. DAWSON arrived at his home in Tulsa early Saturday from Cleveland, Ohio, where he had been in the clinic of the Crile Institute for three weeks. He became ill about two months ago, and went to the Cleveland clinic for examination. Physicians there said he had no organic trouble, and that his recovery would be merely a matter of time.

* * *

BRIG. GEN. JACOB F. WOLTERS, of Houston, Tex., who has just retired as commander of the Fifty-sixth Cavalry Brigade of the Texas National Guard, has been promoted to the grade of brevet major general "in recognition of his long and meritorious service as an officer of the Texas volunteer guard, the Texas National Guard, and among the first general officers to be commissioned in the service of the National Guard of the United States and of the State of Texas."

DR. R. B. NEWCOMBE, assistant state geologist, will give a radio address December 12, on the subject, "The Rising Tide of Oil in Michigan."

* * *

DUANE EDWARDS, of the Mabee Oil Company, has been removed to his home in Oklahoma City from a hospital in Ada, Okla., where he has been seriously ill for two weeks.

* * *

FRANKLIN ROWLEY, head of the purchasing department of the Nederlandsche Coloniale Petroleum Maat., the Hague, Holland, is on a tour of inspection to several industrial works in the United Kingdom.

* * *

DR. D. F. MacDONALD, geologist, of St. Francis Xavier University, Antigonish, Nova Scotia, has arrived in Hudson Bay Junction, Saskatchewan, where he will inspect and report on the oil showings encountered recently.

* * *

J. M. POST, manager of the Eastern division of the Oil Well Supply Corporation, with MRS. POST, spent several days in Tulsa last week. Mr. Post was formerly manager of the Oklahoma-Kansas division, with headquarters in Tulsa.

* * *

AL JOHNSON, production superintendent in the Oklahoma City, Okla., district for the H. F. Wilcox Oil & Gas Company, for several years, has resigned to enter the oil business on his own behalf. H. W. McCULLOUGH has been transferred from Pampa, Tex., to take Mr. Johnson's place at Oklahoma City. JOE BERRY, assistant to Mr. McCullough, has been placed in charge of the gasoline plant. RALPH LINNON, assistant production superintendent at Pampa, has been sent to the Haury-Burrton area in Kansas where C. C. CALLAN will direct the drilling tools.

* * *

O. E. DOUGHERTY, assistant production superintendent of the Sinclair Prairie Oil Company, has returned to Tulsa from a trip to Wyoming.

* * *

L. M. KIPPLINGER, cashier of the Rocky Mountain division of the Ohio Oil Company, with headquarters in Casper, Wyo., is reported much improved and resting well after suffering a severe heart attack.

* * *

CLAYTON PHEBUS, formerly stationed in the Rocky Mountain division in the Denver, Colo., offices of the Texas Company, has been transferred to Wichita, Kans., to replace HARRY FIELDS, geologist in the Kansas district, who recently went to South America to join a geological exploration party in Patagonia. Mr. Phebus will assist J. P. McKEE, the district geologist of Texas, in Kansas.

* * *

KARL WALTER, of Denver, Colo., has joined H. H. Underhill & Company, of Spokane, Wash., as field geologist and will have his headquarters at Lovell, Wyo., where the Underhill company is interested in the Garland Dome developments. Mr. Walter was formerly with the Continental Oil Company, in the geological department, and for the past three years has been with the U. S. Geological Survey in Denver.

* * *

DR. IRVING PERRINE, consulting geologist, has been appointed consultant to the Securities and Exchange Commission in connection with its study of the problems surrounding the issuance of oil royalty interests. Doctor Perrine has served on the geological forces of the State of Louisiana and the U. S. Geological Survey. He has taught geology at Cornell University, where he was graduated, and at the University of Oklahoma. He is a past vice president of the American Association of Petroleum Geologists and a past president of the Oklahoma City Geological Society. In addition, he is a member of the Kansas Academy of Sciences and the Oklahoma Academy of Sciences.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Dec. 1 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	39	1,400	48¼	47½	48	Amerada Corp.	774,875	N.P.	50cQ	10-31-34	47⅝	18½	22¾	12	23	11¼
35¼	21½	6,200	26⅛	25½	25⅞	Atlantic Refining	2,673,834	$25	25cQ	12-15-34	32½	12⅝	21⅞	8⅝	23⅝	8⅝
10	5⅞	5,400	6⅜	6⅛	6¼	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	6⅞	44,600	9	7⅞	8⅝	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	28⅛	9	21	4¼	45⅝	11⅝
14¼	7¼	14,200	8½	8¼	8⅜	Consolidated Oil Corp.	14,218,835	N.P.	14c	10-31-34	15¾	5	9	4	15⅞	4½
22¾	15¾	13,500	19¾	19¼	19½	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	19⅝	4⅞	9⅝	3⅝	12	5
23½	12	3,900	18¼	17⅛	17⅜	General Asphalt	387,149	$10	....	6-15-32	27	4⅝	15½	4¾	47	9⅝
5⅝	2½	600	2⅞	2¾	2⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	7⅜	1⅞	5⅜	1⅛	14⅛	3
3⅜	1	300	1⅛	1⅛	1⅛	Louisiana Oil Refining	1,302,158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	9⅛	2,600	11⅞	11¼	11⅞	Mid-Continent Petroleum	1,857,912	$10	25c	11-15-34	16	3⅜	8⅞	3⅜	16⅜	5
21¼	10	1,900	13¾	13	13¼	National Supply of Delaware	382,591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	8½	8,900	10⅝	10	10¼	Ohio Oil Co.	6,563,107	N.P.	15c	12-15-34	17⅝	4¾	11	5	19½	5⅛
8⅞	5½	1,400	7	6¾	6¾	Pacific Western Oil	1,000,000	N.P.	25c‡	10-25-33	9½	3	8	3	15	2⅞
2½	⅝	No sales ..	..	..	..	Panhandle P. & R.	198,770	N.P.	....	.....	4¼	⅝	1¼	¼	4¼	⅝
20¾	13⅜	10,600	15¾	15	15½	Phillips Petroleum	4,154,687	N.P.	25c	12-1-34	18¾	4¾	8⅛	2	16⅝	4
16⅜	8	2,700	8⅞	8½	8⅝	Plymouth Oil Co.	990,261	$5	4% Stk.	12-22-34	17⅝	6¾	12½	6	18	6
14⅞	6¼	6,000	7½	7	7	Pure Oil	3,038,370	N.P.	....	9-1-30	15⅜	2½	6½	2⅞	11⅞	3¼
39⅛	30	500	30⅝	30⅛	30⅝	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	39¾	17⅝	23⅜	12⅛	42⅝	13
38⅜	20¾	1,200	26⅝	26	26¼	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	12-15-34	43⅜	15	20⅜	6⅝	20¾	5½
11½	6	4,000	7	6¾	7	Shell Union Oil	13,070,625	N.P.	....	6-30-30	11⅝	4	8¾	2½	10¼	2½
89	57	400	70½	70	70	Shell Union Oil pfd.	400,000	$100	....	7-1-31	61	28½	65¼	18	78	15
16¾	7¼	8,700	17⅛	16½	16¾	Simms Petroleum	461,000	$10	30c	8-1-34	12⅜	4⅞	7½	3¼	11	3½
11½	6	700	7⅝	7⅛	7¼	Skelly Oil	1,008,514	$25	....	12-15-30	9⅞	3	5¾	2½	12⅞	2
19⅞	12½	30,000	15	14⅝	14⅞	Socony-Vacuum	31,019,694	$25	15cQ	12-15-34	17	6	12¼	5¼	21	8⅝
42⅞	26½	9,500	32⅝	31¾	31⅞	Standard Oil of California	13,102,900	N.P.	25c	12-15-34	45	19½	31⅞	15⅛	51¾	23⅛
32¾	23¼	12,600	25⅛	24	25⅛	Standard Oil (Indiana)	15,941,894	$25	25cQ	12-15-34	34	17	25⅛	13⅛	38½	13½
41	27	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	39⅞	12¾	16½	7	19	7⅝
50⅛	39¼	9,000	43¼	42⅝	42¾	Standard Oil of New Jersey	25,740,065	$25	50cSA§	12-15-34	47½	22¾	37⅜	19⅞	52½	26
74¼	51½	400	70	70	70	Sun Oil	1,733,013	N.P.	25cQ†	12-15-34	59	35	39⅞	24⅜	45¼	26¾
29⅜	19¾	10,700	22	21⅛	21⅞	Texas Corp.	9,486,417	$25	25cQ	1-1-35	30⅛	10¾	18¼	9¼	36¼	9⅞
6½	2½	1,500	3⅝	3¼	3¼	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	6½	1⅜	4	1½	6½	1⅞
14⅜	8	5,400	9⅜	9	9	Tide Water Associated	5,618,672	N.P.	....	2-16-31	11¾	3⅛	5⅝	2	9	2⅛
86	64½	1,100	86	82	85	Tide Water Associated pfd.	666,524	$100	$2.	12-22-34	65¼	23½	60	20	68	20½
20½	11½	2,400	16¼	15⅝	15⅝	Union Oil of California	4,386,070	$25	25cQ	11-10-34	23⅜	8½	15⅜	8	26⅝	11
21¾	15⅝	600	21½	20⅜	20⅝	Union Tank Car	1,200,000	N.P.	30cQ	12-1-34	22¾	10½	19¼	11¾	25⅛	16
5¾	2½	1,400	2⅝	2½	2½	Wilcox Oil & Gas	424,839	$5	....	5-10-28	5½	2	8¾	2¾	9⅜	2¾

*Ex-dividend. †Plus extras in common stock. ‡Initial dividend. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Dec. 1 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	26	50	30	30	30	Buckeye Pipe Line Co.	200,000	$50	75cQ	12-15-34	39¾	25	35	17½	56	30
5½	2	1,800	2⅝	2⅛	2⅛	Carib Syndicate	579,000	25c	....	.....	7⅜	¼	⅝	¼	2⅜	¼
134½	115	50	134½	134½	134½	Chesebrough Mfg. Co.	120,000	$25	$1Q†	12-28-34	129	71	90	53	129½	75
4¼	1½	14,300	1⅝	1½	1⅝	Cities Service	37,804,394	N.P.	....	6-1-32	6¼	1½	6⅞	1¼	20⅜	5
3¼	½	1,900	¾	½	⅝	Colon Oil	2,200,000	N.P.	....	.....	4	¼	1¼	¼	3⅛	¼
3⅞	¾	1,300	1	¾	¾	Cosden Oil	399,687	$1	....	.....	3⅞	1⅜	2⅞	¼	3¾	⅜
14⅜	9⅝	2,600	13¼	12¾	12¾	Creole Petroleum	6,974,356	$5	....	.....	12	4¾	3⅛	1⅜	3⅞	1⅝
7½	4¼	400	4⅝	4½	4⅝	Darby Petroleum	509,696	$5	25c	7-25-34	8	2⅛	7⅛	1⅝	2½	1⅝
2¼	1	200	1	1	1	Derby Oil & Refining	263,162	N.P.	....	.....	2¾	⅞	3	1	6	1½
37	30	50	34	34	34	Eureka Pipe Line	50,000	$100	$1Q	11-1-34	41¾	20	35	18	36	19
76¾	49¾	1,500	57¼	55¼	55⅝	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	62	24	44¾	23	75½	25⅜
46⅜	33¼	3,300	44⅜	43½	43¾	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	1-2-35	105½	40	55	35⅝	72	44½
17⅞	12⅝	5,900	17½	16⅝	16⅝	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	12-1-34	15⅞	6½	10⅞	6¼	18¼	7⅜
6⅞	3¾	300	4¼	4	4½	Indiana Pipe Line	300,000	$10	15cSA†	11-15-34	8	3⅛	7½	2¾	21⅛	5½
33⅜	19⅜	9,900	32½	31	31¼	International Petroleum	14,247,088	N.P.	56cSA†‡	12-1-34	23½	8⅞	12¼	8	15½	7⅜
5	2⅛	14,900	5	4¼	4¾	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	2¼	⅛	2½	½	2	½
6	3½	No sales ..	..	..	..	Lion Oil Refining	270,000	N.P.	....	10-27-30	9½	1¼	3½	⅞	6¾	1½
8⅜	4¼	200	5¼	5	5	Lone Star Gas	5,382,723	N.P.	16cQ§	3-31-34	11⅞	4¾	11	3⅜	29	5½
5½	4	1,100	4½	4⅜	4½	Mountain Producers	1,682,182	$10	15cQ	10-1-34	6½	2½	4¾	2⅛	5⅞	2
18⅛	13¼	100	14	14	14	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	20	10	14⅝	8	26½	9¾
9½	7	400	7½	7½	7½	National Transit	509,000	$12.50	35cSA	12-13-34	10	5½	10½	6	17½	5
2½	1¾	2,000	2⅛	2	2	New Bradford Oil	1,445,202	$5	10c	9-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	1,100	1¼	1¼	1¼	New Mexico and Arizona	1,000,000	$1	....	.....	1⅞	½	1¼	⅜	3	¾
4¾	3	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	10-15-34	4⅞	3	9¾	7½	14½	5⅞
7	4⅝	100	5½	5½	5½	Northern Pipe Line	120,000	$10	25cSA	1-2-35	6⅛	4¾	5½	3⅛	35½	20
2⅝	⅞	3,700	1¾	1⅝	1⅝	Pantepec Oil	1,608,700	N.P.	....	.....	3¾	⅛	⅝	⅛	2	⅜
3⅜	⅞	400	1¼	1¼	1¼	Ryan Consolidated	296,931	N.P.	....	.....	4¼	⅝	2⅛	⅝	3	¾
7⅞	5½	400	6½	6⅜	6⅜	Salt Creek Producers	1,496,859	$10	20cQ	11-1-34	9¾	3½	5½	2⅞	7⅝	2¾
26½	17½	1,900	23¼	22⅝	23¼	South Penn Oil	1,200,000	$25	30cQ	12-31-34	22⅛	11	16½	9⅝	23⅞	9¼
5¼	3⅝	100	3⅝	3⅝	3⅝	Southern Pipe Line	100,000	$10	15cSA	9-1-34	6	2⅛	10	3¾	17	7
47	41	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	10-1-34	43	24½	37	27	42½	25
17⅝	14⅝	5,300	17½	16⅝	17	Standard Oil of Kentucky	2,606,983	$10	25cQ†	12-15-34	19¼	8⅝	15⅞	8⅞	23⅝	12⅛
16⅞	8½	300	8⅞	8⅝	8⅞	Standard Oil of Nebraska	190,822	$25	....	6-20-34	20½	11	19	10¼	36½	16
28½	12¼	200	13½	12¾	13½	Standard Oil of Ohio	1,610,810	$25	....	1-3-33	41	15½	30½	15½	62½	23
2	⅛	2,400	1¼	1⅛	1⅛	Sunray Oil	1,162,840	$1	....	4-15-31	1½	¼	⅝	⅛	5¼	⅛
11	4⅜	300	6⅜	6⅜	6⅜	Texon Oil & Land	936,028	N.P.	15cQ†	9-29-34	13¾	6¼	10½	4½	12⅞	2½

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Eastern Fields

(Continued from Page 63)

Co., reaming at 530 feet on the Lubana J. Jarvis farm, a test; Godfrey L. Cabot, Inc., drilling at 1,175 feet on the G. W. Truman farm, a test; Kenny and Phillips at 1,841 feet on the S. A. Carpenter farm, a test; a location by the Jarvis Gas Co. on the C. L. and G. W. Jarvis farm, a test. In Lee district, M. F. Crawley has a rig standing on the Lester and Riggs lease. South Eastern Oil & Gas Co. is down 2,179 feet on the Ida M. McCoy farm, No. 5. In Sherman district, F. F. McIntosh is building a rig for a second test on the Seymore Settle farm. L. P. Bickle has started drilling No. 15 on the Martha Stump heirs farm. McCall Drilling Co. is down 1,705 feet on the Hillery Vannoy farm, a test. In Center district, Park Bowser has reached 2,025 feet on the Dora E. Ramsburg farm, No. 9. Chemical Oil Co. is drilling at 1,925 feet on the Tazwell Taylor farm, No. 7.

In Clay County, H. C. Zogg has made a location for a second test on the Thompson Land & Coal Co. tract in Pleasant district. In Raleigh County, Godfrey L. Cabot, Inc., has part of the material on the ground for No. 6 on the Beaver Coal Co. lease in Slab Fork district, and material on the ground for No. 7.

In Gilmer County there is little new work. In Kanawha County, Cabin Creek district, Godfrey L. Cabot, Inc., is down 2,614 and 2,208 feet in Nos. 47 and 48 on the Arabella D. Huntington farm. No. 3 on this farm is being reclaimed and drilled deeper.

In Lincoln County Harvard Gas Co. is drilling out cement at 4,400 feet in the deep test on the Standard Fuel Gas Co. lease in Washington district. In Jefferson district, David Gas Co. has reached 1,400 feet on the Alma Collins farm and in Unin district, Lee Sonsom, trustee, is down the same level on the John M. Sias farm; both are tests.

In Ritchie County there are additional locations. In the Pike Pool district, McCall Drilling Co. has one on the Elizabeth Pyles farm, a test, and J. S. Smith and others one on the Lewis Hanlon farm, also a test. H. N. Rinehart will soon complete the second test on the George Millbarger farm, No. 1 being a fair well.

In Clay County, an outside test is being drilled by Benedum & Trees on the Andrew Tanner farm in Otter district, northeast of the oil and gas pools in that county and on the line of Calhoun County. The present depth is 1,940 feet and there was a show of about 15,000 feet a day of gas in this formation, the Injun sand. It will be drilled deeper.

SOUTHWEST PENNSYLVANIA

The test drilling to the Oriskany sand on the Lehigh Portland Cement Co. tract in Muddy Creek Township, Butler County, by James H. Duff and John T. Galey has reached 3,581feet. The Brown shale was reached at 3,285 feet and extended to 3,334 feet with a showing of oil and gas at 3,321 to 3,334 feet. Fast time is being made and cuttings are being taken.

There were two gas wells and one small producer completed in Southwest Pennsylvania. In North Franklin Township, Washington County, George Bungard & Co. plugged a test on the Ellwood Phillips farm back to the Dunkard sand and it is a 1-bbl. producer. Lower depths were dry.

In Greene County Vance Leases drilled a test on the James and Willis Vance farm to 2,273 feet, the Injun sand. It was unproductive and will be completed in the Gantz sand at 1,555 feet as a light gas well.

In North Strabane Township, Washington County, Wasco Fuel Co. completed No. 3 on the J. R. McNary farm at 2,682 feet. It will make a light Fourth Sand gas well.

In Amwell Township, Washington County, Carnegie Natural Gas Co. is spudding on the R. M. Carrons farm and have reached 1,125 feet in the second test on the M. C. Manon farm. Wise Oil & Gas Co. has reached 1,600 feet on the Jacob Snyder farm.

In East Findley Township, Washington County, Natural Gas Co. of West Virginia is drilling at 840 feet on the J. C. Sampson farm, a test. On the M. C. Francis farm, Myers Hoskinson and others have reached 2,110 feet.

In Greene County, Wasmuth and Callahan are down 2,500 feet in the test on the Mary Bell Durbin farm, Richhill Township. The top of the Fifty Foot sand was at 2,433 feet and extended to 2,450 feet with about 37,000 feet of gas a day showing at 2,441-47 feet. In Jackson Township, Peoples Natural Gas Co. is drilling deeper No. 1 on the Jesse Yeager farm and have reached 3,115 feet. Equitable Gas Co. is down 3,064 feet in drilling deeper No. 1 on the Margaret Kiger farm.

Canadian Fields

(Continued from Page 63)

alites' No. 1, LSD 16, has entered the Madison lime below 4,910 feet. This makes a total of four wells unfinished in the deep lime. Pacalta Oils' No. 1, LSD 7, is below 5,120 feet and waiting for special tools. Carleton Royalties' No. 1, LSD 2, is below 5,810 feet, or more than 350 feet in the lime. Spooner Oils' No. 5 Anaconda, LSD 1, is below 5,730 feet, more than 215 feet in the lime. British Dominion Oil & Development Corp.'s No. 4, LSD 6, is below 4,000 feet, carrying casing behind the tools. Renfrew Royalties' No. 1 Morris & Goodfellow, LSD 3, is below 3,600 feet and close to the Blairmore formation. Publix Oil & Gas Co.'s No. 1, LSD 8, is held up at 4,830 feet owing to loss of some equipment by fire.

Far South Tests

In the southerly extension, Union-Freehold Oil Corp.'s No. 1, LSD 8, Section 21-18-2w5, is redrilling with rotary equipment after cementing back from 4,680 feet to overcome caving. North West Royalties' No. 1, LSD 5, same section, is below 1,900 feet.

On the east side of the South Turner Valley structure, Merland Oil Co.'s No. 2, LSD 13, Section 27-18-2w5, is below 1,570 feet and logging closely with No. 1 producer. Nolan-Hungerford Royalties' No. 1, LSD 5, same section, is below 3,257 feet and logging closely with adjacent wells. Livingston Syndicate's No. 1, LSD 5, Section 34-18-2w5, is drilling up a casing shoe before deepening from 2,880 feet.

Aldersyde Test

On the Aldersyde structure, east of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-28w4, has run casing to bottom at 6,265 feet and is bailing water run into the hole to control gas pressure. If a definite test fails to develop commercial production it will be deepened into the sand.

Tests in Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is below 4,470 feet.

On the Highwood-Sinclair structure south of Turner Valley, Canadian Royalties' No. 1 Banner, LSD 5, Section 34-17-3w5, has cemented casing at about 625 feet.

Inland Petroleum, Ltd., has secured a block of acreage on the south end of the Watson structure about 7 miles north of Lundbreck and is arranging for drilling contract. The company, financed by Southern Alberta capital, has been operating in the Montana end of the Red Coulee Field. Mar Jon-Maxmont's No. 4, LSD 10, Section 20-9-2w5, is below 200 feet and has brought in a control head. Mar Jon Oil Co.'s No. 3, LSD 3, Section 4-10-2w5, is below 325 feet.

Del Bonita Operations

On the Del Bonita structure, southern Alberta, Terminal Oil Co.'s No. 1, NE Section 18-1-21w4, is rigged up. P. K. Adams in charge and it is planned to carry the test into the Madison lime. Sunshine Oils, Ltd., has been organized to drill the test located by Lloyd Clinch and associates in LSD 10, Section 19-1-21w4. O. R. Lang has the contract.

Royalty Increase Opposed

Members of the executive committee of the Oil and Gas Association of Alberta recently interviewed Hugh Allen, minister of lands and mines, in opposition to the contemplated increase of the provincial government royalty on oil production from 5 to 10 per cent to become effective on January 1, 1935.

British Columbia Test

In the Fraser Valley area of British Columbia, Natural Gas Development Corp.'s No. 1 at Boundary Bay set 20-inch casing at 120 feet and is making 16-inch hole below 400 feet. Some trouble with quicksand and caving led to a change to rotary equipment. The first gas sand is expected at around 680 feet.

Red Coulee Test

In the Alberta end of the international Red Coulee Field, Vanalta's No. 6, LSD 3, Section 4-1-16w4, has finished in the sand at 2,468 feet with a small bailing production. It may be shot to make a commercial producer. Contract was handled by O. R. Lang, the test being put down in 36 days' drilling time.

New Prospect in Foothills

Oil showings encountered in Ranchmen's Gas & Oil Co.'s No. 1, on the Aldersyde structure east of Turner Valley, have revived interest in the foothills structure to the north and west, lying chiefly in Townships 21 and 22, Ranges 2 and 3, and extending east and north to the Sarcee Indian Reserve. At one time most of this area was under lease, but little interest has been shown in it till recently. The only test in the immediate area was New Valley Oil Co.'s No. 1, LSD 4, Section 6-21-2w5, some distance north and east of the North Turner Valley Field. It was not carried to conclusive depth, work being stopped in the post-Benton formations at 2,200 feet. Further west, the Anglesey-Lakeview well, drilled in 1928 to 4,500 feet, encountered a show of oil at 1,390 feet and gas in three horizons between 3,251 feet and 4,247 feet.

Drilling in Ontario

In Moore Township, Lambton County, Ontario, a test by Gerald Hussey and Eric Rawson on the George Bell farm, Lot 5, Concession 10, got the oil sand around 460 feet and has been put on the pump for a production test. At 335 feet it struck a pocket of gas flowing at a rate of 5,000,000 feet a day. Additional wells will likely be drilled. In the south end of Brooke Township, Lambton County, a test drilled by George F. Gregory & Son of Petrolia for a Buffalo syndicate on the Ed Mills farm near Little Ireland, finished dry and the outfit is being moved for a new test.

In Kent County, Ontario, Gas Producers Syndicate's No. 1, Gilbert Pardo farm, 2½ miles west of Cedar Springs, has been cleaned out after a shot of 200 quarts and is good for more than 1,400,000 feet a day. The outfit has been moved 1,000 feet south on the same farm where No. 2 is being started.

In the old Tilbury Field, Kent County, Ladd & Cabana's No. 1, Gifford farm, S half, N half, Lot 29, Concession 15, Tilbury East Township, when shot made around 125,000 feet a day. The outfit is being moved for a test for R. L. Pattinson of Chatham on the Jones farm, N Lot 169, Talbot Road, Raleigh Township.

In Haldimand County, Empire Natural Gas, Ltd., of Toronto, has completed 12 wells with aggregate open flow capacity of 2,000,000 feet a day. It has secured 200 acres in Norfolk County where drilling will probably be started this month. The company has a contract with Dominion Natural gas Co. to take its Norfolk production at 30 cents per 1,000 feet.

A Buffalo syndicate is drilling below 250 feet on a wildcat test on the Hurst farm on the river flats east of Alvinston in Lambton County. George Willets & Son of Bothwell are handling the contract.

Rocky Mountain Area

(Continued from Page 72)

kota at 5,950 feet, may make a well and the 7-inch is being run to that depth.

Toole County

Chicago Consolidated Oil Co.'s No. 1 fee, SW NE NW Section 2-34-1w, Kevin-Sunburst Field, was completed in sand at 1,380-1,400 feet for 20 bbls. a day after being shot with 20 quarts and acidized.

Minimum Gas Rate

The Montana Board of Land Commissioners set a minimum price of 5 cents per 1,000 feet for royalty gas sold from state land at a meeting held the past week when leases were granted on three tracts in the Bowdoin gas field in Falling County.

UTAH

Mountain Fuel Supply Co.'s No. 2 Murphy, NE NE Section 21-3n-24, Clay Basin, Daggett County, is shut down at 6,030 feet on account of a storm and may not resume until spring. At that depth cores in the Morrison showed gas saturation. Gas in the Dakota series gauged 22,000,000 feet a day.

Central West Fields

(Continued from Page 60)

In Guernsey County, H. P. Muhlback & Son's No. 1 on the Guernsey Bank & Loan Co.'s tract, Lot 11, is dry at 1,418 feet. Cleland Frame & Co.'s No. 7 James W. Tipton farm, Lot 23, Willis Township, is dry at 1,530 feet.

In Meigs County, Barton & Utsinger's No. 1 P. A. Powers farm, Section 8, Rutland Township, is a gas well at 814 feet. Williams Brothers are drilling No. 2 Bryan and Jennie Saxton farm, Lot 14, same township, and Harrisville Gas Co. is drilling No. 4 Isaac Taylor farm, Lot 19, same township. In Lebanon Township, same county, A. N. Bengel's No. 1 on the Hayman & Co.'s farm, Lot 20, is a gas well at 2,094 feet. Meigs Development Co.'s No. 1 Ada Philson farm, Lot 30, is a gas well at 1,921 feet.

KENTUCKY

Five completions were reported from the Kentucky fields, all in Ohio County. The best producer was Mecca Oil Co.'s No. 6 on the J. T. Smith farm, with an initial of 225 bbls. Snowden-McSweeney Co.'s No. 15 on the G. E. Fuqua farm, in the Roberts Pool, produced 25 bbls. S. J. Sirman's No. 1 David Cheek farm was dry in the Jet and Barlow sands. Cumberland Petroleum Co. and others' No. 2 Guy Richardson farm, near Oak Station, had an initial of 8 bbls. Snowden-McSweeney Co.'s No. 3 on the F. E. Midkiff farm, in the Oak Station Pool, produced 10 bbls. initial.

INDIANA

In Daviess County, C. H. Parriott and others' test on the Baker Wallace farm, Section 21, Veale Township, produced an initial of 90 bbls. at 1,040 feet.

In Pike County, Lexcastle Oil & Gas Corp. got a gas well on the Nettie Rohrscheib farm, in Section 31, Clay Township, at 1,302 feet.

In Perry County, Christ Zoercher's No. 1 Mary Van Winkle farm, SE NE Section 36, Clark Township, was dry. Auburn Stinson's No. 1 on the Rosalia Richardt farm, NW NW Section 12, Troy Township, was dry.

In Posey County, B. F. Wireback's No. 1 on the C. C. Winternheimer farm, SE NE Section 22, Robinson Township, was dry at 1,206 feet, and L. R. Henley's No. 1 Joe Wassmer farm, SW NE Section 12, same township, was dry at 1,580 feet.

In Vanderburg County, John L. Drake's No. 1 John McCutchen farm, SE SE Section 36, Scott Township, was dry at 940 feet.

In Jay County, N. E. Master's No. 1

Fred Miller farm, SE SW Section 28, Wayne Township, is a gas well at 1,009 feet.

In Scott County American Can Co.'s No. 1 is on fee property, in Jennings Township. In Knox County, O. A. Thayer and others are drilling No. 1 Noah A. Hall farm, SW NE Section 15, Busseron Township, and Mead Oil Co. No. 1 M. Bond farm, NW SW Section 14, same township.

ILLINOIS

It looks very much as though the Illinois Field is branching out, and the finding of a good well during November may bring about more activty. Ohio Oil Co.'s No. 26 on the Matilda Byroff farm, SE Section 28, Sugar Loaf Township, St. Clair County, produced an initial of 90 bbls. at a shallow depth of 443 feet.

In Cumberland County Shower and others' No. 1 on the G. Sherwood farm, Section 9, Greenup Township, was dry at 425 feet.

In Lawrence County, Ohio Oil Co. abandoned No. 1 on the A. Westfall farm in Section 11, Petty Township, and No. 26 on the Perry King No. 2 farm, Section 18, same township.

In Clark County, F. E. Stohr and others' No. 14 on the James Turner farm, Section 33, Parker Township, is dry. Leon Stewart and others are drilling No. 8 on the Fred Knecht farm, Section 32, same township. In Crawford County, Karns, Schroekongast and others abandoned No. 1 on the Ira Walter, Jr., farm, NW Section 20, Robinson Township.

In Marion County, John Winbush is drilling No. 1 on his own farm, Section 8, Luke Township.

J. R. McCALDIN DIES

SAN ANTONIO, Tex., Dec. 3.—James Roy McCaldin died at his home in San Antonio Tuesday, November 27. He had been in ill health and death was hastened by a stroke of paralysis on October 10. He leaves his widow and two sons, James Oeland McCaldin, 12, and Roy Oeland McCaldin, age 11. Mr. McCaldin had lived in San Antonio for nine years and had been very active till the last two or three years. He had lived and operated at different times from Wichita Falls, Tulsa, Fort Worth and Shreveport. He discovered the Bethany Field in Louisiana that supplied Shreveport with gas. Later he sold this property to Gulf Production Co. He also developed the Stiles-Meban lease and later sold it to the Gulf.

PIPE LINE HIS PARISH

If any clergyman has a longer or narrower parish than has the Rev. Henry Moss, this young Canadian would like to hear of it. As chaplain of the Iraq Petroleum Co.'s pipe line from Kerkuk, Iraq, to Haifa, Palestine, the Reverend Moss serves a "charge" 1,200 miles long by about 6 feet wide. He also is pastor of St. Luke's Church at Haifa but between Sabbaths he travels along the pipe line to minister to the welfare of the oil workers along its right of way.

Kansas Wildcats

(Continued from Page 64)

Lario O. & G. Co. and Reserve Pet. Co.'s No. 1 Shepherd, SW SW NW Sec. 18-22-5w.
Drlg. 2,405 ft.

Lario O. & G. Co. et al's No. 1 Schrag, NW SE SW Sec. 22-19-4w.
T.D. 725 ft.; fishing.

Stafford et al's No. 1 Krehbiel, NW NW SE Sec. 27-21-3w. (O.W.D.D.)
C.O. at 2,030 ft.

Stark & Well's No. 1 Smith, NW cor. Sec. 30-19-8w.
Location.

Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w.
Show of oil 2,890-2,906 ft.; S.D.

Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
6-in. pipe 3,026 ft.; drlg. 3,200 ft.

ROOKS COUNTY

Stearns & Streeter's No. 1 Meyers, NE NW NW Sec. 34-9-16w.
Drlg. 3,315 ft.

RUSH COUNTY

Corbett, Barbour et al's No. 1 Schmidt, SW SW SE Sec. 10-17-16w.
Siliceous lime 3,575-3,600 ft.; H.F.W.; S.D.

Flynn et al's No. 1 Hartman, SW SE NW Sec. 4-18-16w.
Location.

Lario O. & G. Co. and Phillips Pet. Co.'s No. 1 Benbow, NW NE NE Sec. 13-17-19w.
Rigging up.

RUSSELL COUNTY

Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Rigging up.

Eldorado Ref. Co.'s No. 1 Stratman, SW SE SE Sec. 32-14-11w.
H.P.W. 3,245 ft.; T.D. 3,250 ft.; abd.

Darby Pet. Co.'s No. 1 Jarus, NW SW NE Sec. 16-16-12w.
Drlg. 2,190 ft.

Hartman & Blair's No. 1 Gurney, SE SE NW Sec. 23-14-14w.
Bldg. rig.

Lario O. & G. Co. et al's No. 1 Nuss, NW SW SW Sec. 11-16-14w.
Location.

Lario O. & G. Co. et al's No. 1 Moore, 760 ft. S and 660 ft. E, NW cor. Sec. 34-13-12w.
Cellar.

Tom Palmer et al's No. 1 Herbel, NW SW Sec. 4-12-11w.
6-in. csg. 3,056 ft.; drlg. 3,315 ft.

Wolf Creek Oil Co.'s No. 1 Donovan, SW SW SE Sec. 10-15-15w.
Rig on ground.

SALINE COUNTY

J. Brouk and R. D. Bailey's No. 1 Kluesner, NW NW SE Sec. 34-15-2w.
Location.

Dieter et al's No. 1 Herrington, NE NW SE Sec. 3-13-1w.
S.D. 1,785 ft.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vaniman, C SE NE Sec. 15-20-33w.
T.D. 4,565 ft.; U.R. 8-in. csg.

SEDGWICK COUNTY

Aladdin Pet. Co. et al's No. 1 D. Lauck, SE NE NW Sec. 21-28-2.
Rig.

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-3w.
Drlg. 2,956 ft.

Cameron, Derby Oil Co. and Trees' No. 1 Brainard, SW SE NW Sec. 19-24-2.
Moving in material.

Lee Keller et al's No. 1 Russell, SW SW NW Sec. 16-29-2.
Cellar.

D. R. Lauck et al's No. 1 Roy, SE SW Sec. 28-29-1w.
Dry and abd. 3,848 ft.

Syndicate O. & G. Co. et al's No. 1 Ratzlaff, NE NW NW Sec. 30-26-2.
Sand 2,975-78 ft.; 5 bbls. of oil in 3 hrs.; will run 8-in. csg. to 2,950 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Guthrie, C NW NW Sec. 15-25-11w.
Drlg. 485 ft.

SUMNER COUNTY

T. Palmer's No. 1 Wentworth, NW NW NE Sec. 9-35-2.
Rig.

TREGO COUNTY

Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
Drlg. 4,702 ft.

WASHINGTON COUNTY

Rose Oil Co. et al's No. 1 Penwell, NE NW SE NE Sec. 16-3-3 (O.W.D.D.).
Old T.D. 1,720 ft.; R.U. and S.D.

Gulf Coast Wildcats

(Continued from Page 56)

Texas Co.'s No. 13-B Belcher, W of No. 10-B Belcher, H. N. Little Sur.
Drlg. shale, lime and boulders 4,384 ft.

Texas Co.'s No. 1 Thomas James, 247.5 ft. N and 330 ft. E of SW cor. of Lot 1, A. C.H.&B. Sur. 91, Abst. 402.
Reaming; T.D. 7,318 ft.

Gulf Prod. Co.'s No. 4 Colby, 330 ft. out of most northerly NE cor. of 200-ac. tract, Thomas Sproggins Sur.
T.D. 6,152 ft.; P.B.; drlg. shale and lime.

Texas Co.'s No. 1-A Massey, 330 ft. out of NW cor. of 33-ac. tract in H. Stevens Sur.
T.D. 7,957 ft.; set whipstock at 7,422 ft.; shut down.

Texas Co.'s No. 3 Natalie, 1,112 ft. S, 45° W, 840 ft. W, 48° E from E cor. of tract in H. N. Little Sur.
Location.

Texas Co.'s No. 1 C. L. Rash, 330 ft. S, 42° W, and 330 ft. S 48° E from N cor. of lease in Thos. Spraggins Sur. A-366; W.O.).
Cmtd. 5-in. csg. 5,657 ft.; T.D. 5,690 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Texas Co.'s No. 84 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease in M. Varner Sur.
Temporarily S.D. 5,502 ft.

BARBERS HILL—CHAMBERS COUNTY

McAlbert Oil Co.'s No. 7 J. F. Wilburn, 150 ft. W of No. 6 and C of H. Griffin Sur.
T.D. 4,793 ft.; I.P. 625 bbls. per day; 5/16-in. choke.

Moody Corp.'s No. 1-C E. W. Barber, 302 ft. from N line and 312 ft. from E line of "B" lease, H. Griffith Sur.
Drlg. salt 2,025 ft.

Humble O. & R. Co.'s No. 7-B Kirby, 200 ft. W of No. 6 in Henry Griffith league.
Drlg. salt 3,950 ft.

Sun Oil Co.'s No. 6 Higgins, 302 ft. W of E line and 482 ft. N of S line of lease.
Drlg. sand and shale 4,203 ft.

Sun Oil Co.'s No. 10 Chambers, 50 ft. from N and W lines of lease.
Reaming 2,658 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 188 ft. E of W line and 40 ft. S of N line and 130 ft. W of No. 16.
Derrick.

Sun Oil Co.'s No. 32 J. Wilburn, midway between wells No. 17 and 21, or 150 ft. from each well.
Sidetracking 3,106 ft.; T.D. 3,257 ft.

Texas Co.'s No. 10 Wilburn, 475.8 ft. N, 29 deg., 10 ft. W from SW cor. of lease.
Bldg. derrick.

Texas Gulf Prod. Co.'s No. 4-B E. W. Barber, 75 ft. S of Moody Corp.'s No. 6-A Barber and 75 ft. from SW line of 15-ac. lease, H. Griffith Sur.
Comp. 577 bbls. first 18 hrs., ⅝-in. choke, 330 lbs. pressure.

Texas Gulf Prod. Co.'s No. 3 O. W. Winfree, 595 ft. S of N line and 50 ft. W of Drlg. shale and lime 5,346 ft.

Yount Lee Oil Co.'s No. 25 Chambers County, 75 ft. S, 50 ft. W of NE cor. of lease.
Drlg. shale 4,667 ft.

Yount Lee Oil Co.'s No. 27 Chambers Co., 400 ft. W of No. 24 and in line with Nos. 24 and 21.
Derrick.

Yount Lee Oil Co.'s No. 28 Chambers County, 50 ft. N S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur.
Derrick.

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 J. R. Farmer, James Scott Sur., 150 ft. out of most southerly 50-acre tract.
Coring saturated sand 4,445 ft.

Allied Minerals, Inc.'s No. 1 J. H. Blackwell, 1,400 ft. from E line, 100 ft. from S line of 50-ac. of J. H. Blackwell 100 ac., John Huff Sur.
Drlg. sticky shale 4,053 ft.

Midland Oil Co.'s No. 1 P. F. Coulter, 150 ft. from S line, 4,174 ft. from W line of 100-ac. tract, Miller League No. 2.
Drlg. shale and lime 3,970 ft.

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract.
Drlg. sticky shale 4,472 ft.

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-acre lease, James Scott Sur.
Location.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 1,873 ft. S along W line from NW cor. of James Frazier Sur., and 2,184 ft. at R/A.
Drlg. sand and shale 4,578 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 43 Cade, N. Fitzsimmons Sur., half way between Nos. 36 and 38 and 150 ft. E at right angles.
No report.

ARRIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 4-X Arriola fee, 400 ft. E of No. 3-X.
Coring sand 4,892 ft.; drill stem test showed no pressure and little salt water.

BATSON—HARDIN COUNTY

J. H. Burt et al's No. 1 Jordan, 300 ft. E and 100 ft. S of No. 1, Mary Hooks Sur.
Location.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 9 R. Jordit, 200 ft. due south of No. 5 R. J.
Coring sandy shale 1,229 ft.

Hines Bros.' No. 1 Coswell.
Swabbing; T.D. 3,822 ft.

SOUR LAKE—HARDIN COUNTY

Alpha et. Co.'s No. 2-A Wm. Weiss, 100 ft. W of No. 2.
Spudded.

Alpha Pet. Co.'s No. 2 Weiss, E flank of dome.
Abnd. 5,644 ft.

Sun Oil Co.'s No. 2 Bernard Corp., 150 ft. from N and W lines of Lot 11, E.T.&B. Sur., Sec. 69.
Reaming 7,130 ft.

Texas Co.'s No. 314 fee, 200 ft. E at R/A to mid-point between wells Nos. 311 and 312.
T.D. 1,624 ft.; plugged back to 1,500 ft.

GOOSE CREEK—HARRIS COUNTY

Kerring's No. 1 Williams, 150 ft. from SE cor. and 55 ft. NE of Hybush's No. 2, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 80 Simms-Smith, Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
Reaming to bottom 6,735 ft.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Prod. Co.'s No. 10 H. C. Cain, 350 ft. S and 290 ft. E of NW cor. of lease and 317 ft. N of No. 9, J. Hamilton Sur No. 879 (workover).
Drlg. sand 4,086 ft.

Rio Bravo Oil Co.'s No. 27-A Settegast, 377 ft. S, 553 ft. W of NE cor. of Settegast "A" tract, James Hamilton Sur.
Coring 3,871 ft.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
Coring 4,768 ft.

MYKAWA—HARRIS COUNTY

West Prod. Co.'s No. 1 Diamond, Blk. 12, F. J. Rothas Sur.
Fishing; T.D. 3,600 ft.

Danciger O. & R. Co.'s No. 1 Williams, SW cor. of 29-ac. lease.
Drlg. shale 2,215 ft.

West Prod. Co.'s No. 1 Lobit, C of Lot 17, Erin Gardens Subd., F. J. Rothaas Sur.
No report.

TOMBALL—HARRIS COUNTY

Humble O. & R. Co.'s No. 1 Gossett.
Comp. T.D. 5,557 ft.; 327 bbls. 24 hrs., ¼-in. choke.

Humble Oil & Ref. Co.'s No. 5-B Hope, 1,900 ft. from S line and 466 ft. from W line of "B" lease, A. Senchall Sur., Abst. 733.
Location.

Humble O. & R. Co.'s No. 3 Kuehn.
Shale 5,135 ft.

Humble O. & R. Co.'s No. 5 Reid.
10¾-in. csg. 5,544 ft.; T.D. 5,553 ft.

Humble O. & R. Co.'s No. 1 Tallman.
Shale 5,807 ft.

Humble O. & R. Co.'s No. 5 B. Quilter, 466 ft. E of W line, A. Seuchel Sur.
Drlg. shale 3,771 ft.

Humble O. & R. Co.'s No. 2 Rudel, 2,498 ft. N of S line, 787 ft. W of E line and 727.6 ft. E of W line, James House Sur.
Drlg. shale 3,170 ft.

Texas Co.'s No. 2 Albert Ziegler, 466 ft. E and 466 ft. N of SW cor. of lease, Wm. Hurd Sur.
T.D. 5,584 ft.; comp.. no gauge.

KITTRELL-HOUSTON AND WALKER COUNTIES

Crown Central Pet. Corp.'s No. 1 Texas Long Leaf Lbr. Co. and Thompson Bros., 150 ft. from W line, 150 ft. from N line of 40-ac. tract in J. S. Estheridge Sur., Abst. 399.
Location.

Humble Oil & Ref. Co.'s No. 3 Shaw, Charles McEllis Sur.
Rig up.

Humble O. & R. Co.'s No. 2 Shaw, 330 ft. from SE line of lease and 660 ft. SW of No. 1 Charles McEllis Sur.
Comp. T.D. 2,015 ft.; I.P. 28 bbls. per hour, ¼-in. choke.

Humble O. & R. Co.'s No. 1 Texas Long Leaf Lbr. Co., 330 ft. from SW line and 330 ft. from SE line of Texas Long Leaf Lbr. Co., 696-ac. tract, C. C. McEllis Sur.
Abnd. 3,870 ft.

Humble O. & R. Co.'s No. 2 Texas Long Leaf Lbr. Co., 330 ft. SW of NE line, 660 ft. SE of No. 1, Chas. McEllis Sur., Abst. 382.
Location.

Humble O. & R. Co.'s No. 3 Texas Long Leaf Lbr. Co., 330 ft. SE of NW line, 330 ft. SW of NE line, and 660 ft. NW of No. 2, Chas. McEllis Sur.
Location.

VANDERBILT—JACKSON COUNTY

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquis Sur.
Rigged up and S.D.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50-ac. of Miller 100-ac. tract in Ray Musquis Sur.
Rig up.

BIG HILL—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 1-A Pipkin, 2,640 ft. S and 2,050 ft. W of NE cor. of survey.
Drlg. sand and lime 4,410 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Drlg. rock salt 3,282 ft.

CLEVELAND—LIBERTY COUNTY

Blackgold Pet. Co.'s No. 1 R. D. McDonald, 30 ft. due W of Gulf Prod. Co.'s 6-C Kirby, T. Devers Sur.
Location.

William J. Colegrove et al's No. 1 State School Land & Dev. Co., 466 ft. from W line and 170 ft. from S line of survey, Clayton Hooper Sur.
Location.

Gulf Prod. Co.'s No. 7 Kirby, 1,100 ft. N of No. 6-C Kirby.
Drlg. shale and boulders 5,160 ft.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 14 Moores Bluff. 1,675 ft. S. 10 deg. 8 min. E of No. 10.
T.D. 4,698 ft.; reaming 4,613 ft.

General Crude Oil Co.'s No. 9 Davis, 1,300 ft. each way from S and E lines of lease in D. Kokernut Sur.
T.D. 5,642 ft.; reamed to 5,383 ft.; drill pipe stuck.

General Crude Oil Co.'s No. 1 W. D. Kay, Malcom Duncan Sur., 1,537 ft. along N line from NE cor., 560 ft. S at R/A.
Drlg. hard sand 4,232 ft.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 3 Crow & Jacobs, 300 ft. each way out of SW cor. of survey. H.&T.C. Sur., A 253.
Drlg. sandy shale 4,547 ft.

HULL—LIBERTY COUNTY

Gulf Prod. Co.'s No. 12 W. L. Thomas, 1,650 ft. N and 150 ft. E of SE cor. of 300-ac. tract, Jessie Devore Sur.
Drlg. shale 5,280 ft.

G. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 100 ft. S line, 150 ft. E line, 42-ac. Gulf tract.
Derrick.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
Swabbing 7,381 ft.

MARKHAM—MATAGORDA COUNTY

Hawkins Oil Co.'s No. 1 Hawks fee, 1,850 ft. from N line and 1,650 ft. from E line of 20-ac. lease.
T.D. 600 ft.; derrick down.

Powers Prod. Co.'s No. 4 Myers, in line with wells Nos. 1 and 2, being 250 ft. E of No. 2.
Derrick down

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 3 Falves, 466 ft. from N line and offsets to Sun Oil Co.'s No. 20 Keystone Mills.
Drlg. shale and lime 3,500 ft.

Houston Oil Co.'s No. 11 Cartwright, N offset to No. 10 Cartwright.
Location.

Texas Co.'s No. 13 W. S. Rhodes.
5-in. at 5,030 ft.; T.D. 5,107 ft.

SPLENDORA—MONTGOMERY COUNTY

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 330 ft. from N and E lines of the W½ of Blk. No. 8, Walker County School Land Sur.
Rig up.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 60 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
Prepare to spud.

PORT NECHES—ORANGE COUNTY

Port Neches Pet. Corp. et al's No. 1 W. E. Organ, 450 ft. from NE line and 150 ft. from NW line of A. Schramm Sur., S of Port Neches Field.
Driving piling.

Texas Co.'s No. 3-B Polk, 300 ft. S, 450 ft. W of SE cor. of Mary E. Hall Sur. No. 2.
Bldg. derrick.

Texas Co.'s No. 10 Kuhn, 300 ft. N, 450 ft W of SE cor. of Mary E. Hall Sur. No. 2.
Rig up.

Texas Co.'s No. 6 Kuhn, 150 ft. E, 150 ft. N of SE cor. of Mary Hall Sur.
Washing to bottom 5,479 ft.

LIVINGSTON—POLK COUNTY

T. D. Humphries' No. 1 J. C. Whitforth, Block H.
Derrick.

B. M. York et al's No. 1 Kingsbury County Holding Corp., 463 ft. from E and W lines, and 330 ft. from S line of Tract No. 19, A. Viesca Sur.
Drlg. shale 3,355 ft.

GRETA—REFUGIO COUNTY

Atlantic and Seaboard's No. 7-G O'Brien.
Derrick.

Hewitt & Daugherty's No. 12 Lambert.
Rig up.

United Prod. Co.'s No. 10 Fannie Heard, SE cor. of lease; workover.
T.D. 3,565 ft.; jetted well and had S.W.; P.B. from 3,578-2,417 f.; W.O.C.; jetting.

United Prod. Co.'s No. 13 M. F. Lambert, C of N½ of Blk. 15 of the M. F. Lambert Subd.
Sand 3,500 ft.; plugged back to 3,456 ft.; set 6⅝-in. csg.

United Prod. Co.'s No. 14 M. F. Lambert, C of S½ of Blk. 6, of M. F. Lambert Subd.
T.D. 3,589 ft.; set 9⅝-in. csg.

United Prod. Co.'s No. 15 M. F. Lambert, C of S½ of Blk. 15 of M. F. Lambert Subd.
T.D. 3,517 ft.; reaming at 2,000 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 1 Johnson, center of Blk. 63; (workover).
T.D. 5,140 ft.; temp. abnd.

Houston Oil Co.'s No. 17 W. J. J. Heard, 660 ft. SE of No. 16 W. J. J. Heard.
T.D. 4,940 ft.; I.P. 400 bbls. per day, 3/16-in. choke; 900 lbs. W.P.

Houston Oil Co.'s No. 18 W. J. J. Heard, S offset to United Prod. Co.'s well on N side of river.
Spudded.

Houston Oil Co.'s No. 17 Rooke (200-ac. tract), S offset to No. 17 P. H. Rooke.
Set 10-in. csg. at 1,179 ft.; W.O.C.

United Prod. Co.'s No. 9 Wilson Heard, 2,414 ft. SE along NE property line of Wilson Heard 250-ac. tract, thence at R/A 330 ft. to point of location.
Rigging up.

United Prod. Co.'s No. 2 Powers (old well).
Moving in derrick to work over.

COLETO CREEK—VICTORIA COUNTY

Rupert Cox's No. 1 Antone Trybil, R. Manchola Sur.
Derrick.

Houston Oil Co.'s (John F. Camp) No. 1 Maurer, 330 ft. out of NE cor. of Maurer 198 acres in R. Manchola Sur. (W.O.).
Drlg. 2,200 ft.

Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur.
S.D. 5,200 ft.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Humble O. & R. Co.'s No. 17 O'Connor, 933 ft. SW of No. 15. Keating Sur.
T.D. 4,493 ft.; prepare to set screen at 4,417 ft.

Texas Co.'s No. 9 McFaddin.
Location.

Texas Co.'s No. 1 J. H. Jones, 330 ft. each way from N line and NW lines of lease, Wm. Cooper Sur.
Rig up.

SAN FELIPE—WALLER COUNTY

Seaport Oil Co.'s No. 1 J. W. Avery, 330 ft. from E line, 330 ft. from N line of NE cor. of 29-ac. tract, John McFarland Sur.
Prepare to place on pump; T.D. 2,378 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 5 J. W. Hunt.
Set 10¾-in. at 138 ft.; T.D. 151 ft.

LOUISE—WHARTON COUNTY

Pure Oil Co.'s No. 3 Charles T. Kountze, 1,980 ft. SE and 330 ft. SW of N cor. of Morris & Cumming Sur., Sec. 9.
Derrick.

Pure Oil Co.'s No. 1 John Macha, 318 ft. from NW line and from SE line of F. Walnut Sur., and 467 ft. from NE line of 101.53-ac. lease, M.&C. Sur. No. 25.
Location.

Pure Oil Co.'s No. 1 G. F. Wharton Est., 1,497 ft. from SW line and 318 ft. from SE line of F. Walnut Sur., Abst. A-35.
Rig up.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres.
T.D. 8,271 ft.; set 7-in. csg. at 8,058 ft.; surveying hole.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 2 State.
Cmtd. surface csg.

Shell Pet. Corp.'s No. 1 A. Watkins, 970 ft. S, 1,990 ft. E of NW cor. of Sec. 17-12s-12w.
Location.

Shell Pet. Corp.'s No. 2 State.
Reaming; T.D. 6,695 ft.

Shell Pet. Corp.'s No. 20 Watkins, 1,611 ft. S and 216 ft. W of NE cor. Sec. 18-2s-12w.
Bldg. new derrick; T.D. 4,024 ft.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Superior Oil Prod. Co.'s No. 3 Comeaux, 1,324 ft. E of NW cor. NE Sec. 34.
Derrick.

Superior Oil Prod. Co.'s No. 2 Arceneaux, 1,968 ft. S and 1,708 ft. W of NE cor. of Sec. 33-3s-3e.
Drlg. hard sand and shale 3,677 ft.

Superior Oil Prod. Co.'s No. 1 Herbert, 2,695 ft. S and 2,058 ft. E of NW cor. Sec. 35-3s-3e.
Drlg. sand and shale 7,859 ft.

Superior Oil Prod. Co.'s No. 5 Larcade, 1,665 ft. S and 483 ft. E of NW cor. Sec. 35-3s-3e.
Derrick.

Superior Oil Prod. Co.'s No. 2 Comeaux, 1,476 ft. S and 467 ft. W of NE cor. Sec 34-3s-3e.
T.D. 8,901 ft.; flowed salt water; S.D. 8,901 ft.

Superior Oil Prod. Co.'s No. 1 B. Iseringhauser, 330 ft. S and 2,546 ft. W of SE cor. Sec. 27-3s-3e.
Derrick.

Superior Oil Prod. Co.'s No. 3 Iseringhauser, 1,817 ft. E, 330 ft. N of SW cor. Sec. 27.
Drlg. hard sand 6,503 ft.

Superior Oil Prod. Co.'s No. 1 Malancon, 375 ft. S and 63 ft. E of NW cor. SW Sec. 34-3s-3e.
9⅝-in. csg. 8,670 ft.; T.D. 9,455 ft.

Superior Oil Co.'s No. 3 Larcade, 693 ft. N and 1,197 ft. E, SW cor. Sec. 36-3s-3e.
Recemented liner; T.D. 8,693 ft.

Superior Oil Co.'s No. 4 Larcade, 658 ft. S and 2,392 ft. E from NW cor. of Sec. 35-3s-3e.
9⅝-in. csg. 7,832 ft.; T.D. 7,850 ft.

Superior Oil Prod. Co.'s No. 1 Prejan, 334 ft. N, 330 ft. E of SW cor. NE Sec. 34.
Derrick.

Superior Oil Prod. Cor.'s No. 1 Lucien Lavergne, 696 ft. E and 330 ft. N of SW cor. of Sec. 27-3s-3e.
Sidetracking 8,023 ft.

Superior Oil Prod. Co.'s No. 1 Moise Lavergne, 269.7 ft. W and 98 ft. N. of SE cor. of Sec. 28-3s-3e.
Derrick.

Superior Oil Prod. Co.'s No. 1 Trahan, 1,392 ft. N, 543 ft. W of SE cor. Sec. 27.
Straightening hole 6,426 ft.

Superior Oil Prod. Co.'s No. 3 Hermandes, 329 ft. from S line, 669 ft. W of NE cor. NW Sec. 34-3s-3e.
9⅝-in. csg. 7,836 ft.; I.P. 858 bbls., 18/16-in. choke; T.P. 1,300 lbs., C.P. 1,300 lbs.; T.D. 7,851 ft.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton's No. 1 School Land.
Drlg. shale 4,420 ft.

Burton-Sutton Oil Co.'s No. 4 School Land. 4,891 ft. W and 150 N of SE cor. of Sec. 16-4s-12w.
Derrick.

Humble O. & R. Co.'s No. 9 Cameron Meadows, 2,266 ft. N and 526 ft. S of NE cor. Sec. 21-14s-13w.
Location.

Texas Co.'s No. 1 Miami Corp.
Drlg. shale 7,962 ft.

CHOCTAW DOME—IBERVILLE PARISH

Standard Oil Co.'s No. 5 Gay, 2,450 ft. S and 425 ft. E of NW cor. of NE Sec. 32-9s-11e.
Location.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 2,474 ft. W, SE cor. Sec. 31-21s-16e.
Building derrick.

Texas Co.'s No. 15 State, 2,602 ft. N and 1,308 ft. W, SE cor. Sec. 31-21s-16e.
Drlg. sand 4,830 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease. Sec. 34-11s-1w.
Prepare to sidetrack 6,190 ft.; T.D. 9,379 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 3 H. C. Hanzen. 150 ft. S and 150 ft. E of NW cor. of lease, Sec. 13-12s-10w.
Location.

Texas Co.'s No. 13-B State, 400 ft. N of NE cor. of lease. Sec. 13-12s-10w.
Drlg. shale 5,726 ft.

Calcasieu Oil Co.'s No. 39 Watkins, 807 ft. W, 1,184 ft. N of SE cor. Sec. 13-12s-10w (workover).
Drlg. sand rock 3,043 ft.

Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w.
Location.

Union Sulphur Co.'s No. 1 Barbee est., 1,720 ft. N line, 320 ft. E of SW cor. Sec. 13-12s-10w.
Abnd. 6,491 ft.

Union Sulphur Co.'s No. 4 Humble, 710 ft. N and 330 ft. W of SE cor. Sec. 11-12s-10w.
Drlg. shale and lime 5,643 ft.

Yount Yee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.

Yount Lee Oil Co.'s No. 4 Carter, 160 ft. S, 305 ft. W of NE cor. of 30-ac. lease. Sec. 22-12s-10w.
Drlg. shale 3,943 ft.

Yount Lee Oil Co.'s No. 2-A Gulf Land. 1,160 ft. S and 50 ft. E of the NW cor. of Sec. 21-12-10.
Rig up.

NEW IBERIA—IBERIA PARISH

I. Delcambre's No. 1 Viatar, 150 ft. E, 150 ft. S and 150 ft. W of SE cor. of tract, Sec. 41-13s-5e.
S.D. 245 ft.

Harrison & Abercrombie's No. 2 Schwing, beginning at E cor. of Sec. 24-12s-8w, thence southwesterly along section line 2,054 ft., thence NW at R/A 1,121 ft.
Drlg. shale 4,420 ft.

Texas Co.'s No. 1 Hansen, NE along NW line of lease 508 ft., thence 150 ft. E at R/A, Sec. 54-12s-7e.
Rig up.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 11 Wait, 330 ft. E, 330 ft. N of SW cor. NE SE Sec. 12.
Location.

Magnolia Pet. Co.'s No. 4 Willett.
13⅜-in. csg. 1,576 ft.; T.D.

Magnolia Pet. Co.'s No. 10 Wait, 330 ft. N and E of SW cor. of lease.
T.D. 6,947 ft.

Shell Pet. Corp.'s No. 12 Hyde, 330 ft. W, 330 ft. S of NE cor. NW Sec. 13-9s-7w.
Coring shale 4,230 ft.

Shell Pet. Corp.'s No. 11 Hyde, 330 ft. E and S of NW cor. NE Sec. 13-9s-7w.
Reaming; T.D. 4,908 ft.

Shell Pet. Corp.'s No. 5 Stratford, 1,994 ft. S, 330 ft. E of NW cor. of Sec. 18
Comp.; I.P. 739 bbls. 24 hrs.; T.P. 825 lbs.; C.P. 700 lbs.; T.D. 6,978 ft.

Shell Pet. Corp.'s No. 10 Hyde.
Coring sand 6,292 ft.

Shell Pet. Corp.'s No. 3 Tuten, 1,159 ft. W and 330 ft. from S of NE cor. SE Sec. 13-9s-6w.
T.D. 6,649 ft.; tested 50 lbs. pressure on drill stem test.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 260 ft. N of No. 13, Sec. 47-3s-2w
Drlg. shale 7,092 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 25 State.
S.D. 1,414 ft.

Texas Co.'s No. 11 L.L.&E., Sec. 30-21s-20e.
Comp.; T.D. 3,967 ft.; I.P. 1,704 bbls. per day on ½-in. choke.

Texas Co.'s No. 13 L.L.&E.
T.D. 4,352 ft.; P.B. and S.T. 3,157 ft.

LAKE HERMITAGE—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 2 LaFourche, Basin Levee Dist.
Drlg. shale 6,003 ft.

LAKE PELTO—TERREBONNE PARISH

Whitstone O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 25-19s-14e.
Drlg. 2,061 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran, 650 ft. N and 21 deg. 30 min. E of No. 3 in Twp. 20s-26e.
Drlg. sand 4,325 ft.

LEESVILLE—LAFOURCHE PARISH

Emerald Oil Co.'s No. 1 Bowie Lbr. Co., 4,431 ft. N and 1,632 ft. E of SW cor. Sec. 53-10s-8e.
Drlg. 1,808 ft.

Emerald Pet. Co.'s No. 7 State of Louisiana.
Set 7⅝-in. csg. at 3,872 ft.

Gulf Prod. Co.'s No. 2 Allen.
Drlg. 5,352 ft.

Gulf Prod. Co.'s No. 5 Allen.
Derrick.

Gulf Prod. Co.'s No. 10 Bernard, 1,833 ft. E, 958 ft. S of NW cor. Sec. 26-21s-22e.
Derrick.

Gulf Prod. Co.'s No. 2 Community, 50 ft. W and 1,300 ft. E of NW cor. Sec. 24-21s-22e.
Derrick.

Gulf Prod. Co.'s No. 8 Bernard, 568 ft. E along S line of 5.08-ac. tract from SW cor. and 446 ft. N at right angles, Sec. 26-21s-22e.
Drlg. 3,880 ft.

Emerald Pet. Co.'s No. 10 State, west bank, 300 ft. S of well No. 1.
Location.

Emerald Pet. Co.'s No. 11 State, east bank, 327 ft. N of well No. 1.
Location.

Emerald Pet. Co.'s No. 12 State, east bank, 250 ft. S of well No. 1.
Location.

Frank L. Hill's No. 1 Bernard, 1,422 ft. N and 808 ft. E of SW cor. Sec. 26-21s-22e.
P.B. to 3,450 ft.

Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e.
S.D. 4,189 ft.

Texas Co.'s No. 21 L.L.&E., Sec. 26-21s-22e.
Drlg. 4,925 ft.

Texas Co.'s No. 28 L.L.&E.
T.D. 3,916 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 98 ft. N of SE cor. N½ NE Sec. 8-10s-19w
Prepare to make D.S. test; T.D. 6,620 ft.

Union Sulphur Co.'s No. 1 Moss (W.O.).
Drlg. sand and shale 5,076 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Prod. Co.'s No. 8 Wilson Cochran, 568 ft. E along S line of L. Bernard 5.08-acre tract from SW cor. of Sur., 446 ft. N at right angles to said line, being 400 ft. N of line drawn through No. 1 and No. 3, Sec. 26-22s-12e.
T.D. 3,186 ft.; I.P. 476 bbls. on ½-in. choke; comp.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 1 Taylor, 440 ft. E and 440 ft. S of NW cor. SW Sec. 13-9s-4w.
Drlg. sand 5,556 ft.

Humble O. & R. Co.'s No. 1 R. C. Jarnegan, 440 ft. S, 440 ft. E of the NW cor. SE Sec. 12-9s-4w.
Drlg. shale 6,070 ft.

Humble O. & R. Co.'s No. 2 Devilbiss, 1,399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w.
Coring shale 9,028 ft.

Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 12-9s-4w.
Coring sand 9,305 ft.

Shell Pet. Corp.'s No. 1 Carter, 660 ft. N and 330 ft. W of SE cor. NW Sec. 1-9s-4w.
Rig up.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land.
Drlg. hard shale 5,780 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 806 fee.
T.D. 2,832 ft.; I.P. 500 bbls.

Union Sulphur Co.'s No. 790 fee, 929 ft. S and 802 ft. W of C Sec. 29-9s-10w.
Drlg. hard sand 5,126 ft.

Union Sulphur's No. 2 Uldrick, 500 ft. N of No. 1.
Drlg. sand 4,705 ft.

Union Sulphur's No. 803 fee.
9⅝-in. csg. 2,820 ft.; T.D. 2,832 ft.

Union Sulphur Co.'s No. 2 Kelly, 1,345 ft. S, 198 ft. W of the NE cor. of Sec. 30-9s-10w.
Drlg. sand 4,563 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10. Sec. 13-13-3w.
S.D. 7,439 ft.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 7 Noble.
T.D. 3,583 ft.; P.B. to 3,730 ft.; flowing 60 bbls. dly.; comp.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn, 300 ft. E of No. 7.
T.D. 7,270 ft.; P.B. to 6,574 ft.; to run whipstock.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Quintana Oil Co.'s No. 1 L. S. Hillboldt, M. N. Allen League.
Rig up.

J. S. Wheeless et al's No. 1 Lewis Wittenburg, 330 ft. S and 1,100 ft. from W line of 202.5-ac. tract, Sec. 179, H.&T.C. Sur.
Drlg. shale 4,450 ft.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bacheider Sur.
T.D. 7,663 ft.; W.O.C.

C.&R.G. Drlg. Co.'s No. 1 Frank Trukas, 300 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
S.D. 7,890 ft.

Holt et al's No. 1 Griffith, J. B. Bailey Sur.
T.D. 4,300 ft.; waiting orders.

Stanolind Oil & Gas Co.'s No. 1 J. W. Surface, 466 ft. N and 400 ft. W of most easterly SE cor. of 75.9-acre tract, A.C.H. &B. Sur., Abstr. 462.
Drlg. shale 4,560 ft.

Turnbull & Irwin's No. 1 Sutherland & Buck, 330 ft. from N and S lines and 150 ft. from W line of 40-ac. tract, A. Robinson Sur.
Drlg. shale 6,211 ft.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C.
T.D. 7,119 ft.; trying to pull 6½-in. csg.

Steen Drlg. Co.'s No. 1 Stansel, 500 ft. along N line from NW cor., thence 350 ft. at R/A of 371.2-ac. tract, A. R. Parsa Sur.
T.D. 6,168 ft.; set csg. at 6,120 ft.; comp. flowing 151 bbls. of distillate in 24 hrs.; T.P. 2,000 lbs.; C.P. 2,000 lbs.

CHAMBERS COUNTY

Humble O. & R. Co.'s No. 1 Middleton, 466 ft. each way out of the SW cor. of survey.
Rigging up.

Sun Oil Co.'s No. 1 Hamilton 1,400 ft. from N line, 1,400 ft. from W line of survey T.&N.O. Sur., Sec. 128.
Drlg. sand and shale 5,181 ft.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 2,300 ft. SE of NW cor. of Sec. 2,200 ft. SW at right angles in I.&G.N. Sur.
S.D. 6,194 ft.

FORT BEND COUNTY

Benedum & Trees' No. 1 Jacob Hensler, Charles D. Sayers Sur.
Drlg. 3,820 ft.

W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
S.D. 2,900 ft.

Vico Oil Co.'s No. 1 H. R. Darst, 5,690 ft. N of S line and 685 ft. W of E line of E. Powell Sur.
Drlg. shale 5,320 ft.

GALVESTON COUNTY

Gillock Pet. Co.'s No. 2 Maco Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur.
T.D. 1,500 ft.; waiting on surface pipe: S.D.

H. E. Sedberry, trustee's No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 165 ft. NE line, Lot 66, Sec. 7, Hall & Jones Galveston Island.
S.D. 53 ft.

Humble O. & R. Co.'s No. 1-B Stewart, 415 ft. S of Dickinson Bayou, 460 ft. E of E line of Blk. 16, Beatty Subd., John Sellers Sur.
T.D. 8,024 ft.; flowed 129 bbls. 24 hrs.; T.P. 640 lbs.; C.P. 850 lbs.

Pure Oil Co.'s No. 1 J. W. Shelor (231.2 acres), 2,760 ft. S of Dickinson-San Leon highway and midway E and W lines of lease, B.B.B.&C. Sur.
T.D. 8,016 ft.; cmtd. 7-in. csg. at 7,929 ft.; I.P. 1 bbl. of distillate per hour through ⅝-in. choke; T.P. 2,000 lbs.; C.P. 300 lbs.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
No report.

Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
No report.

Roan et al's No. 1 S. W. Sealy, 3,474 ft. N of S line and 850 ft. E of W line of survey, B. F. Smith Sur., 2 miles SW of Kellum Springs.
Location.

HARRIS COUNTY

Esco Oil Co.'s No. 1 E. P. Soureau, 3,322 ft. from W line and 2,215 ft. from S line of 350-ac. tract, W. P. Harris Sur., Abst. A-30.
Rig up.

T. S. F. Oil Co.'s No. 1 J. B. Hine, Arthur McCormick Sur., Abst. 46.
Rig up.

C. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.

W. U. Paul's No. 1 E. M. House, 2,200 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
Drlg. shale 6,900 ft.

JACKSON COUNTY

Atkins & O'Neil's No. 1 Hodges, C Sec. 22, Blk. 1, I.&G.N. Sur.
Drlg. 1,180 ft.

Humble O. & R. Co.'s No. 1 Lowrance, 660 ft. from SW and SE lines of Wilson Sur. No. 5.
Drlg. shale 6,161 ft.

JEFFERSON COUNTY

Magnolia Pet. Co.'s No. 1 E. Herbert Trust,

990 ft. N, 330 ft. E of SW cor. of P. M. Bell Sur. No. 2.
Abnd. 9,708 ft.
Navarro Oil Co.'s No. 1 Talliver, 1,570 ft. from N line and 870 ft. from W line of Shadric Morris Sur.
Derrick.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. E line, 990 ft. E line of lease.
Coring shale 8,553 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 280 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur.
S.D. 3,593 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 500 varas from N line of Samuel Strong Sur.
D.S. stuck; T.D. 3,130 ft.
A. L. Maxwell's No. 1 M. D. Hinciiff 4e- ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Hicks, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 6⅝-in. csg. at 5,029 ft.
Turnbull and Irwin's No. 1 Lynott and Bat fum, 466 ft. S and E of NW cor. of 80 100 acres of W 400 acres of 856-ac. tract James Robeson Sur.
Cmtd. 7-in. csg. on bottom 7,511 ft.; prepare to test.

MADISON COUNTY

Sunray Oil Co.'s No. 1 Ferguson, 1,000 ft S and 750 ft. E of SE cor. of Francis Fulcher Sur.
Moving in material.
Texas-New York et al's No. 1, 3,000 ft. E and 1,750 ft. S of NW cor. of J. H. Pearson Sur.
Bldg. derrick.

MATAGORDA COUNTY

Dr. Griffith's No. 1 fee, 4,000 ft. from S line and 3,000 ft. from W line of Wm. B Bell Sur.
Rig up and S.D.

MONTGOMERY COUNTY

Reynolds Drlg. Co. et al's No. 1 Mrs. Clara B. Stewart, 330 ft. S and E of most easterly inner cor. of 595-ac. tract, John Corner Sur.
Drlg. 1,002 ft.

ORANGE COUNTY

Sine Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 100 ft. from NE line of Godwin 20-ac. tract.
S.D. 2,708 ft.

POLK COUNTY

Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 1½ miles NE of Corrigan.
S.D. 60 ft.
J. F. Anderson's No. 1 E. I. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 50, P. J. Mineral Sur.
Waiting on a new mud pump; T. D. 5,-304 ft.
Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 300-ac. tract in the George Jameson Sur.
Location.

REFUGIO COUNTY

Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 3,830 ft. from E line of J. Coughlin Sur.
Location.
Conroe and Santa Clara Oil Co.'s No. 1 Ella West, west part of county, near Blanco River.
Abnd. 6,005 ft.
Dale Sneed's No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd.
S.D. 6,626 ft.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 2 Bryan & Flourney, 400 ft. from No. 1.
Drlg. 415 ft.

TRINITY COUNTY

Boone Bros.'s No. 1-C Texas Long Leaf Lbr. Co., 900 ft. due N of NE cor. of A. Henry Sur., Abstract 255.
Spudded.

VICTORIA COUNTY

Texas Co.'s No. 1 Irene Foster, 55° N, 2,-900 ft. E, and 35° E, 980 ft. from W of NW cor. of Sec. 16, F.&N.O. Sur.
Set 10-in. csg. 812 ft.
Texas Co.'s No. 1 Thompson Bros. Lbr. Co., beginning at NW cor. of survey on Trinity River, thence N 55 deg., E 2,640 ft. S 35 deg., E 7,111 ft.
Drlg. shale 2,564 ft.

WALLER COUNTY

Stanolind O. & G. Co. et al's No. 1 J. W. Tharp, 466 ft. from S and E lines of J. M. Bennett Sur. No. 100.
Drlg. shale and lime 2,260 ft.

WHARTON COUNTY

Whitehead and Rash's No. 1 C. T. and D. Kountze, 1,320 ft. from N line, 330 ft. from E line of S.A.&M.G. Sur., Sec. 1, Abst. 328.
Location.

SOUTH LOUISIANA
ACADIA PARISH

Humble O. & R. Co.'s No. 1 American Rice Mills, 660 ft. S and 1,320 ft. W from NE cor. Sec. 27-10s-1e.
Drlg. shale 2,051 ft.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract, Sec. 33-10s-2e.
Drlg. hard sand 4,225 ft.

BEAUREGARD PARISH

Gulf Ref. Co.'s No. 1 Lutcher Moore, 660 ft. from S line, 760 ft. from E line, NE Sec. 35-6s-12w.
Drlg. brittle shale 7,835 ft.
Richardson & Martin's No. 1 Southwest Lbr Co., SW Sec. 6-5s-12w.
S.D. 6,322 ft.

CALCASIEU PARISH

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 18-9s-3w.
Drlg. shale 4,202 ft.
Gulf Prod. Co.'s No. 1 H. Starks et al, 1,650 ft. W and 1,980 ft. S of NE cor. Sec. 26-11s-12w.
Bldg. road.
Humble O. & R. Co.'s No. 1-B Industrial Lbr. Co., 466 ft. N, 1,399 ft. W of the SE cor. Sec. 27-8s-12w.
Drlg. hard sand 6,606 ft.
Plummer & McDaniels' No. 1 Cockburn-Hood, 1,072 ft. E and 2,400 ft. N of SW cor. Sec. 13-10s-12w.
Location.
Union Sulphur Oil Co.'s No. 1 State Land, 1,940 ft. S, 2,513 ft. E of NW cor. Sec. 12-9s-8w.
Drlg. sandy shale 6,759 ft.
Wheeler Oil Co.'s No. 1 Gabbert, 1,322 ft. E and 548 ft. N of SW cor. of Sec. 28-9s-7w.
Drlg. shale 5,152 ft.

EAST FELICIANA PARISH

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,490 ft.

EVANGELINE PARISH

Humble O. & R. Co.'s No. 1 Haas, 1,250 ft. SE of Bayou Nezpique, 466 ft. NE of SW line of Sec. 22-4s-1w.
Drlg. sand 6,304 ft.

CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 2,270 ft. N of NE cor. Sec. 1-14-9w in Twp. 13s-9w.
Drlg. hard sand 6,531 ft.
Texas Co.'s No. 1 Jessen, 1,170 ft. E and 550 ft. N of C Sec. 24-14s-10w.
Drlg. sandy shale 2,099 ft.

JEFFERSON DAVIS PARISH

George W. Strake's No. 1 Calcasieu Nati. Bank, 200 ft. S and E of NW cor. SE NE Sec. 12-9s-6w.
Drlg. shale 5,933 ft.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 3 Harang Plantation.
S.D. 6,586 ft.
Emerald Pet. Co.'s No. 1 Bowie Lumber Co., 4,421 ft. N and 1,632 ft. E of SW cor. Sec. 53-10s-3e.
Drlg. 3,300 ft.
R. L. Gay, trustee's No. 1 Godchaux, 2,920 ft. N and 1,746 ft. E in common cor. of Lots 24 and 26, Twp. 15s-19e.
S.D. 6,236 ft.
Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and S.D

PLAQUEMINES PARISH

Texas Co.'s No. 12 State-Garden Island Bay, Sec. 107-23s-32e.
Abd. 1,748 ft.; well blew out and cratered.
Venice Corp.'s No. 1 Burras.
Drlg. lime rock 1,558 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 530 ft. E, NW cor. NE SW Sec. 35-4n-2e.
Rig up and S.D.
C. D. Loe's No. 1 Barrett, 330 ft. NW of SE line and 880 ft. NE of SW line of Sec 40-5n-1w.
Rig up and S.D.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 2,198 ft. W of SE cor. Sec. 135-14s-14e.
S.D. 6,001 ft.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 29-5s-8e (workover).
Prepare to make drill stem test; T.D. 5,-943 ft.
H. J. Weir's No. 1 Declouet, Sec. 108-3s-5e, near Lafayette Parish line and 3 miles N of Anse La Bute Field.
S.D. 2,322 ft.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7.
Drlg. hard shale and lime 2,607 ft.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 350 ft. E of W line, NE cor. Sec. 32-11s-3e.
T.D. 4,056 ft.; fishing.

La.-Ark. Wildcats

(Continued from Page 62)

O. K. Oil Co.'s No. 1 Franklin Realty Co., 100 ft. N and E, SW cor. SE SW Sec. 32-11-9.
S.D. 1,340 ft.
Windsor Oil Co.'s No. 2 Jenkins, 1,980 ft. S and E, NW cor. Sec. 14-13-11.
W.O.S.R. 2,775 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S. and W. NE cor. SW NW Sec. 29-9-13.
Treated with acid 1,837 ft.
R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW S.D. 2,130 ft.
Tested dry after acid; S.D.; W.O. 1,935 ft.
Erle P. Halliburton's No. 3 Burkett, 330 ft. N and W, SE cor. SW SE Sec. 9-9-13.
Comp.; pumping 10 bbls. at 2,044 ft.
Helena Oil & Gas Co.'s No. 1-B Graham, 330 ft. S and W NE cor. NE NW Sec. 20-9-13.
Pumping S.W. 2,000 ft.
L. D. Higgins' No. 2 Burkett, 330 ft. S and E. NW cor. NE NE Sec. 16-9-13.
Comp.; pumping 5 bbls., 2,035 ft.
Lawson-Leavell's No. 2 Bank of Pleasant Hill, 330 ft. N and W, SE cor. NW NE Sec. 29-9-13.
Rigging up.
Lawson-Leavell's No. 1 Whitney Corp., 330 ft. N and E, SW cor. NE SW Sec. 5-9-13.
Drlg. 2,300 ft.
Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13.
Abd.; will not pump at 2,031 ft.
Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12.
Set 10-in. 40 ft.

TENSAS PARISH

Schumacher, tr.'s No. 1 Curry, Sec. 39-11-12e.
Arranging to deepen 3,759 ft.

UNION PARISH

Carbons Consolidated's No. 1 Beasley, 1,050 ft. S, 150 ft. E, NW cor. Sec. 6-21-4e.
Drlg. 1,935 ft.

ARKANSAS
ARKANSAS COUNTY

Grand Prairie Realty Co.'s No. 1 Fischer, 200 ft. S and E, NW cor. NE NW Sec. 6-6s-4w.
Aarranging to test 962 ft.

HEMPSTEAD COUNTY

Ark. Drlg. Co.'s No. 1 Jones, 1,000 ft. S, 600 ft. W, NE SE Sec. 11-14-24.
Coring 3,040 ft.
B. A. Austin's No. 1 McWilliams, 200 ft. N and W of SE cor. NW SW Sec. 19-13-28.
S.D.; rig repair 2,050 ft.
A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.
F. W. Martin & Co.'s No. 1 Lafferty, 500 ft. N and W SE cor. NW Sec. 17-14-24.
P.B. to 2,200 ft.

LAFAYETTE COUNTY

Benedum & Trees' No. 2 Bodcaw, C SE SE NE Sec. 19-16-23.
Drlg. 4,750 ft.
Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23.
S.D. 2,910 ft.
W. H. Harvey's No. 2 Allen, Sec. 18-19-24.
Set 10-in. 200 ft.
A. H. Tarver's No. 1 Russell, 330 ft. S and W, NE cor. NW Sec. 12-17-25.
Drlg. 2,035 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 4 Beck, SE cor. SE SW Sec. 34-15-26.
Coring 2,929 ft.
Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 30-15-27.
S.D. 3,177 ft.
Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
1,200 ft. oil in hole at 2,930 ft.
King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 34-14-23.
S.D. 3,020 ft.
A. C. Roan's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Set 10-in. 120 ft.
Lee Timberlake's No. 1 Frost Est., 330 ft. N and E, SW cor. SW SE Sec. 27-15-26.
Set 10-in. 200 ft.

NEVADA COUNTY

O. F. Whittaker's No. 1 Wesley, Sec. 3-15-20.
Junked hole 2,092 ft.; skidding over.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.
T. J. Gaughan's No. 1 Bragg, 330 ft. N and E, SW cor. NE SE.
Drlg. 1,240 ft.

UNION COUNTY

T. L. James & Co.'s No. 1-A W. H. Perdue, 330 ft. N and W, SE cor. NE NW Sec. 10-17-14.
Drlg. 50 ft.
Jovian Oil Corp.'s No. 1 Perdue, 150 ft. N, 650 ft. E, SW cor. NW SE Sec. 3-17-14.
Drlg. 2,995 ft.
Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 25-16-14.
Sidetracking 6⅝-in. 2,320 ft.
Lion Oil Ref. Co.'s No. 10-A Flenniken, 300 ft. N, 630 ft. E, C Sec. 10-16-15.
W.O.S.R. 2,408 ft.
Joe Modisette's No. 1 Union Saw Mill Co., 330 ft. S and W, NE cor. NW SE Sec. 14-18-14.
Drlg. 2,520 ft.
C. E. Murdock, Inc.'s No. 7 J. M. Gregory, 330 ft. N, 330 ft. W, SE cor. NE SE Sec. 10-17-14.
Rigging up.
Router Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
W.O.S.R. 2,139 ft.
S. H. A. Oil Co.'s No. 2 J. W. Taylor, 330 ft. S and W, NE cor. NW SE Sec. 10-17-14.
Set 10-in. 121 ft.; drlg. 2,338 ft.
Marine Oil Co.'s No. 1 Townsend, 330 ft. N and E, SW cor. SW NE Sec. 10-17-14.
Rigging up.
Skelly Oil Co.'s No. 6 W. H. Perdue, C SE SE NW Sec. 10-17-14.
Rigging up.
Tubal Pet. Co.'s No. 1 Gaddy, 240 ft. N and E, SW cor. SE NW Sec. 14-17-14.
S.D.; W.O. 3,416 ft.

WOODRUFF COUNTY

L. P. Lively's No. 1 Perkins, 330 ft. N, 360 ft. E, SW cor. SE SE Sec. 5-8n-2w.
Rigging up.
J. N. Watkins et al's No. 1 Upshaw, 330 ft. N and E, SW cor. NW SW Sec. 17-5n-2w.
Rigging up.

MISSISSIPPI
AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

BOLIVAR COUNTY

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w.
S.D. 30 ft.

GREENE COUNTY

United Gas Pub. Service Co.'s No. 1 Greene County School Land, W½ W½ Sec. 16-1n-5w.
Drlg. 3,730 ft.

HARRISON COUNTY

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
Drlg. 1,125 ft.

HINDS COUNTY

City of Canton's No. 3 Belhaven, 50 ft. NW of C Sec. 35-6n-1e.
Coring 2,385 ft.

ISSEQUENA COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Martin & Bender, 300 ft. S and E, NW cor. Sec. 11-12n-3w.
Drlg. 1,450 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 530 ft. W, 300 ft. S, C Sec. 24-7n-13w.
T.A. 3,900 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
Set 10-in. 560 ft.; S.D.; W.O.

MONROE COUNTY

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w.
Drlg. 2,350 ft.
P. J. McAlpine's No. 1 Crook, 1,080 ft. S. 90 ft. W, NE cor. Sec. 15-12s-18w.
Set 8-in. 730 ft.

SIMPSON COUNTY

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e.
Set 7-in. 2,048 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor SW SE Sec. 24-2n-9e.
Partly rigged up and S.D.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-8w.
Set 10-in. 300 ft. and S.D.

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-12n-14e.
S.D. 20 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA
CADDO—BLANCHARD

C. W. Brown's No. 2 P. A. Sharp, SE cor. NE NE Sec. 10-18-6.
Rigging up.
Louana O. & G. Co.'s No. 3 Cushman, SE cor. SW SW Sec. 33-19-16.
Set 8-in. 20 ft.; drlg. 790 ft.
M. Segall's No. 3 Sharp, 330 ft. S, 1,550 ft. E, NW cor. Sec. 11-18-16.
Coring 915 ft.

CADDO—HOSSTON

Shoreline Oil Corp.'s No. 44 Crystal, 330 ft. S and E of C Sec. 13-21-16.
Derrick.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Fogman, SE cor N¼ SW NE Sec. 18-7-11.
S.D.; W.O. 2,373 ft.
Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. for wtr. 2,120 ft.
Crichton & Co.'s No. 1 Williams, 660 ft. N and E, SW cor. SW SE Sec. 6-7-11.
Set 6-in. 2,345 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12.
S.D. 1,100 ft.
Foster & Hartman's No. 1 Bowman Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-13.
S.D.; W.O. 2,696 ft.
E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11.
Pulling liner 2,580 ft.
H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 3-7-11.
Rigging up.
H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 3-7-11.
S.D. 2,250 ft.
K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Derrick down.
W. L. Posey's No. 1 Burkett, 330 ft. N and E, SW cor. NW SW Sec. 10-9-13.
Rigging up.
J. H. Reeves' No. 1 Bowman-Hicks, 1,650 ft. E, 335 ft. S, NW cor. Sec. 9-7-12.
Drlg. 1,117 ft.
Spier & Butler's No. 1 Williams, Sec. 24-7-11.
Set. 10-in. 60 ft.; drlg. 1,900 ft.
Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-3-12.
Recmtd. 10-in. 134 ft.; T.D. 2,210 ft.
S.D. 2,470 ft.

EAST TEXAS (BORDER COUNTIES)
CASS COUNTY

R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur.
S.D. 4,016 ft.

HARRISON COUNTY

W. T. Boyd's No. 1 Rudd, John McWilliams Sur.
Coring 1,525 ft.
R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur.
P.B. to 3,524 ft.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
Set 7-in. csg. with packer 2,072 ft.
Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
S.D. 2,153 ft.
R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Rigged up and S.D
Fred Stovall Drlg. Co.'s No. 1 H. B. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

SHELBY COUNTY

Cliff Stovall's No. 1 Pickering Lbr. Co., C H. Patterson Sur.
S.D. 1,130 ft.
Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 250 ft.

ALABAMA
HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 2,410 ft.

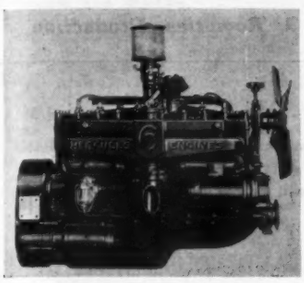
LAMAR COUNTY

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
S.D. 4,182 ft.

NEW AND IMPROVED EQUIPMENT

Larger Bore Model Added to Hercules Engine Line

The Hercules Motors Corp., Canton, Ohio, has added a large-bore model to its JX series of 6-cylinder gasoline engines. This is the JXD, 4x4¼-inch, 320



cubic inch displacement. It has wide application in the oil country.

This engine develops 83.8 horsepower at 2,800 r.p.m., and 65.5 horsepower at 1,800 r.p.m. with maximum torque of 204 foot-pounds at 1,000 r.p.m. (N.A.C.C. Rating 38.4-horsepower). A 2½-inch chrome molybdenum crankshaft is supported by seven bearings of the high lead bronze precision type. The cylinder and crankcase are cast integrally of molybdenum alloy iron. The cylinder head is detachable, the L head design being fitted with exhaust valves 1⅝ inches clear diameter, inlet valves 1½ inches clear diameter.

Lubrication is forced feed by geared pump to all connecting-rod and main bearings. Oil is thrown off from the rods lubricating the cylinder walls. Aluminum alloy pistons are fitted with four rings all above the piston pins, an oil control ring three-sixteenths inch wide and three compression rings one-eighth inch wide.

A four-bearing camshaft on the right side of the engine looking from the flywheel has all cams forged integral.

All connecting-rod bearings of high lead bronze precision type are 2 inches in diameter, the length of rod being 8 inches from center to center.

The three other sizes in this JX series are: JXA, 3⅜x4¼-inch, 228 cubic inches, 63-horsepower at 2,800; JXB, 3⅝x4¼-inch, 263 cubic inches, 68-horsepower at 2,800; JXC, 3¾x4¼-inch, 282 cubic inches, 73-horsepower at 2,800. All four engines in this series are identical as to installation measurements.

Improved Mud Screen Put on Market by Vernon Tool

Vernon Tool Co., Ltd., 2740 East Thirty-seventh Street, Los Angeles, has announced an improved mud screen. The McNeely vibrating screen, outgrowth of the extensive experience of J. W. McNeely in the screening and reclaiming of rotary drilling fluids, is of simple design and sturdy, compact all-steel construction.

The vibrating force, developed by an unbalanced shaft, is transmitted equally to all points on the screening surface, eliminating dead spots. The screen cloth fits tightly on a curved frame and cannot flex or whip. The curved screen surface, a McNeely feature, facilitates the rapid disposal of waste cuttings. Under favorable conditions the McNeely screen has a capacity of approximately 700 gallons of drilling fluid per minute, and may be driven by electric motor or steam turbine. Installation in the field is made easy as the screen is built as a unit, requiring a minimum of headroom. The screen may be moved easily from one location to another.

Among the Equipment Houses

William E. Hall, president of the Duriron Co., Inc., Dayton, Ohio, has announced the appointment of M. L. Bettcher, formerly general superintendent, to the position of general manager, succeeding Dudley H. Miller, who becomes executive vice president.

—

The Mid-Continent Pipe & Supply Co., Inc., has been established in Oklahoma City with Joseph Brown president, J. Brown vice president, and Edward Cooper secrtary and treasurer. The concern deals in casing, line pipe, machinery and oil field supplies.

—

Oster-Williams of Cleveland, Ohio, manufacturer of pipe and bolt threading equipment, have opened an office and display room at 292 Lafayette Street, New York, in charge of the firm's district manager, H. B. Van Osten.

—

The Sivyer Steel Casting Co., Milwaukee, Wis., has appointed the M. N. Dennenbaum Co., 1001 Shell Building, Houston, Tex., as its representative for the Gulf Coast district on refinery equipment.

—

F. Daly Sullivan, president of the Sullivan Co., Memphis, Tenn., announces that new machinery is being installed in its new factory in Memphis, and it is expected to be operating at full capacity by December 1.

—

The Timken Roller Bearing Co., Canton, Ohio, has appointed Whitley B. Moore general manager of the industrial division. John L. Young, formerly district general manager in charge of the Pittsburgh office, has been advanced to assistant general manager of the industrial division. Harry D. Robb succeeds Mr. Young. Harry H. Wood has been transferred to Pittsburgh as manager of the rolling mill division.

—

The General Cable Corp. has appointed George Sherry general merchandise manager and H. B. Tompkins general sales manager.

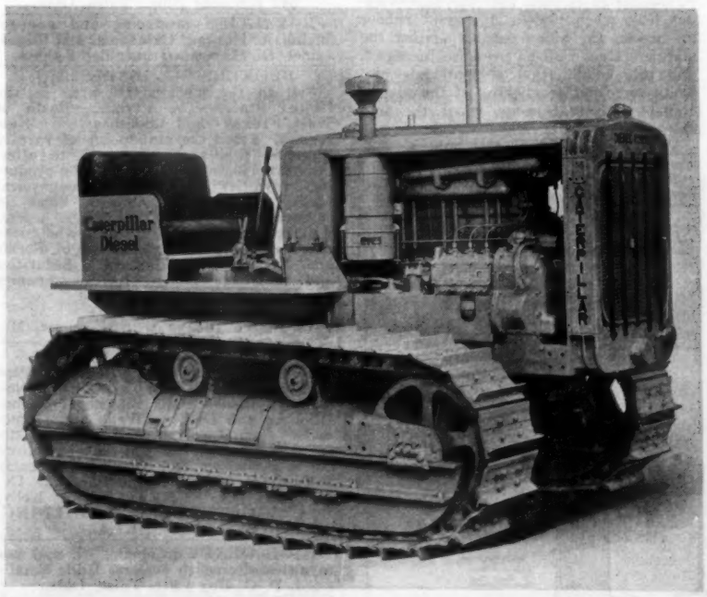
—

The Sperry-Sun Well Surveying Co., Philadelphia, Pa., in order to be nearer to its Gulf Coast operations, has moved its Texas office from Dallas to 3118 Blodgett Avenue, Houston, Tex.

—

J. F. Bowman, vice president in charge of sales of the Federal Motor Truck Co., Detroit, Mich., has announced the appointment of Don G. Furlong as district sales manager, covering the Ohio territory.

"Caterpillar" Diesel Forty Designed for Oilfield Use



The Diesel Forty tractor, announced by Caterpillar Tractor Co., Peoria, Ill., brings greater power, increased strength and the outstanding operating economy of the Diesel engine to a long list of oilfield jobs, according to the manufacturer.

Its 3-cylinder Diesel engine develops 44 horsepower at the drawbar and 49 horsepower on the belt. The power of the engine is balanced by the strength of the machine itself, the announcement states. The track assembly and track frame feature the rugged construction found in the largest "Caterpillar" models, including cast-steel diagonal braces, enclosed recoil springs, double front idlers and heavier track links of improved design.

This combination of increased power and strength means ability to handle bigger loads in all four working speeds. The Diesel Forty frame is drilled for mounting such equipment as bulldozers, trail-builders, hoists and side booms. Wide gauge models and a wide variety of track equipment are available. Shipping weight is 14,708 pounds.

Men Well Known in the Equipment Field

Elmer R. Smith, of Lane-Wells Co., Los Angeles, Calif., has been transferred to Houston, Tex., to take charge of the service and sales of the company in the

ELMER R. SMITH

Gulf Coast, Texas and Mid-Continent territory. The Houston branch office, at 1315 Palmer Street, is equipped to provide the Lane-Wells gun perforator and magnetic fishing service as well as packers, liner hangers and other products of the company.

After four years with the engineering department of one of the major oil companies in California and three years with Martin-Decker Corp., Mr. Smith has spent the last year with the Lane-Wells Co. where he has had extensive experience in the operation of the gun perforator. As manager of the Houston branch, he will be in active charge of this perforating service.

Breaks in Pipe Repaired by Split-Coupling Clamp

The Skinner split-coupling clamp, a new specialty brought out by the M. B. Skinner Co., South Bend, Ind., is designed for repairing clean breaks in cast-iron pipe. Two malleable iron rings with intermeshing fingers, drawn together by heavy steel bolts, compress a double-taper soft gasket over the break and permanently shut off the leak.

The gasket is completely sealed by a Monel band at the top and by hard gasket tips at the sides. The clamp adjusts itself to diameter variation in different classes of cast mains. One man can apply the device.

According to the company, long established in the field of pipe repair manufacture, the flexibility of the clamp prevents subsequent breaks near the one repaired.

Extra-Long Friction-Type Rotary Slip Is Developed

The Texas Iron Works, 1423 Maury Street, Houston, Tex., announces completion of tests and preparedness to make deliveries on a new extra-long friction-type rotary slip for all sizes of drill pipe. The new slip, according to the manufacturer, affords a longer effective gripping surface than previous types of rotary slips through the use of a special adapter bushing which occupies the space normal-

ly occupied by the kelly bushing. The new slip was especially designed to prevent crushing or swaging of drill pipe on strings longer than 5,000 feet.

The manufacturers point out that the depth of the tapered rotary slip bowl in the average rotary is approximately 8⅝ inches. This, it is said, becomes the effective lengths of rotary slips used in bowls of this dimension, since that portion of a set of slips which extends above or below the tapered bowl has little holding or gripping power.

The special adapter bushing furnished for use with the new extra-long T-I-W rotary slips provides an effective backing of 13⅝ inches—an increase of slightly more than 60 per cent over normal types of slips. The new slips are of the three-piece unit-type design, which keeps all segments in constant alignment. Easily replaceable liners permit quick dressing of slips on the derrick floor, and interchangeable liners for smaller sizes of pipe are available.

All liners have a friction surface which cannot cut or scar the drill pipe. Overall length of the new T-I-W slips is 20 inches. Weight is about the same as that of regular types of rotary slips, and the new slips are said to be easily handled because they "ride" the pipe out of the hole. Pulling the handles together sets them around the drill pipe for easy lowering into the special adapter bushing. Full details and specifications may be obtained from the manufacturer.

Abercrombie Valve Saves Pumps From Overpressure

Abercrombie Pump Co., Houston, Tex., is now on full production of the Abercrombie patented shear-relief valve for protecting pumps and pump parts against overpressure. This valve has been tested under most strenuous conditions and, according to the manufacturers, is operating satisfactorily throughout the country.

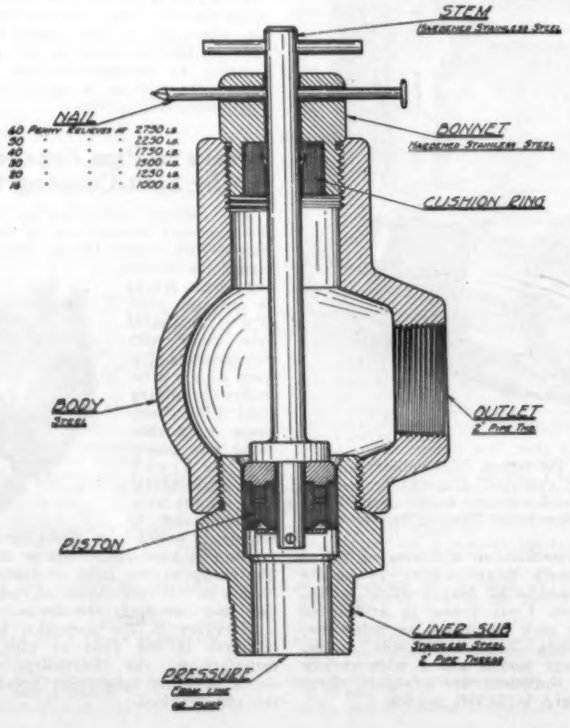
Pump pressure against a specially designed rubber piston is relieved at a set point by the shearing of a common wire nail set in a hardened stainless steel valve stem. Each valve carries a table on the name plate listing nail sizes and the pressure at which each nail size shears. To further simplify setting of the valve a nail gauge is included so the operator cannot mistake nail sizes.

The design is such that the valve cannot leak when closed. A special rubber lip presses the piston harder against the stainless steel wall as pressure increases, and this combination of materials prevents corrosion or sticking of the piston. Relief is instantaneous when the nail shears, the piston traveling across the valve body, entirely out of the way of the fluid flow.

Loss of the nail is the only damage when the valve releases.

The shear-relief valve is built in 1,000 to 2,750-pound pressure for slush-pump service and 250 to 1,000-pound pressure for gathering pumps or similar service. While the same principle is involved in both high and low pressure types, the low-pressure valve body is a single-unit bronze casting and the high-pressure body is made of high-grade steel with the valve bonnet and liner sub of stainless steel.

Since the low-pressure valve piston commonly contacts oil, this piston is made of a special composition undamaged by hot oil, chemicals or other corrosive agents. The outlet on the low-pressure valve may be equipped with a lead line to return the oil to the pipe-up line, to prevent waste.



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OIL INFORMATION
Monthly reports of Potentials, Pipe Line Runs and Allowables in Oklahoma Prorated Pools. Daily reports of Reconditioning and Drilling Wells and Corporation Commission orders affecting the Oil Industry. Statistical data required under Securities Act furnished Regular Subscribers $7.50 per month. OIL INFORMATION BUREAU, Clyde Kelly, Mgr., 306 PETROLEUM BUILDING, OKLAHOMA CITY, OKLA.

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Dealers in Oil Royalties since 1918.

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USED I-BEAMS—Various lengths in sizes from 3½-in. x 6-in. to 6-in. x 10-in. inclusive. For all practical purposes as good as new beams. Priced low, f.o.b. Wichita and Oklahoma City.

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MUD PUMPS—If you need one or more good used Slush Pumps we can likely furnish exactly what you want. We now have several "Ideal," "Lucey" and "Johnson" Pumps in various sizes and at various locations which have been overhauled in our shops and on which we can give a guarantee of satisfaction. Complete information, prices, etc. will be furnished interested parties. Contact any store or Wichita Office.

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The latest and most modern refinery ever dismantled. Complete cracking, lub, and skimming plants. All sizes pipe, valves, and fittings. Two 325 plate, 48" Carbondale wax presses and other wax plant equipment.

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40,000 feet Naylor Spiralweld Toncan steel pipe in 40 foot joints. with or without victraulic couplings, located in Oklahoma City.

FORTY 55,000 BBL. STEEL ROOF TANKS

Will sell where are or will cut down and re-erect on your grade at great saving. Complete line of tanks, any capacity.

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SONKEN-GALAMBA CORPORATION
64 No. 2nd St. Kansas City, Kansas.

For Sale—Equipment

FOR SALE—Rotary drill rig. CHEAP for cash. 2564 Cockrell Ave., Fort Worth, Texas.

FOR SALE OR TRADE—Line Pipe, Casing, Engines, Oil Field Equipment. LEE MORRISON SUPPLY CO., Bartlesville, Okla.

Equipment Wanted

WANTED—Ten or fifteen 8,000-gallon tank cars. Please give full particulars as to age and condition of cars. Address Box G-440, The Oil and Gas Journal, Tulsa, Okla.

POSITIVE gas meters wanted, good for at least one hundred pounds pressure. Muskegon Pipe Line Company, Muskegon, Michigan.

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Before disclosing your invention to anyone, send for blank form:
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Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
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Washington, D. C.

Situations Wanted

Refinery maintenance-const. engineer. tech. grad., 13 yrs. exp. Now in east, go anywhere. Avail. Dec. 1. Address Box-442, The Oil and Gas Journal, Tulsa, Okla.

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

The Advertising Dollar

should buy space that reaches the maximum number of readers with money to spend. In the oil industry only one medium does this—

The Oil and Gas Journal

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NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, N. Mex.

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MONEY TO LOAN

TO RESIDENTS OF TULSA ONLY

If you need cash, and have a settled producing royalty or working interest, you can borrow against future runs.

Property must be free of incumbrance or to be cleared by loan. Interest at legal rates if security acceptable.

Give brief description of property, and advise amount you want to borrow.

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The Oil and Gas Journal,
Tulsa, Okla.

JOHN MORRIS, Seventh Floor, 1237 Market Street, Philadelphia, will help float small deal. No stock selling. Send full facts in first letter.

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order.

GROUP with $5,000,000 cash interested purchase U. S. oil production with or without refinery. Send full details. Address Box G-451, The Oil and Gas Journal, 415 Lexington Ave., New York City.

Incorporations

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS—Fees small; submitted forms. Chas. G. Guyer, 901 Market Street, Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

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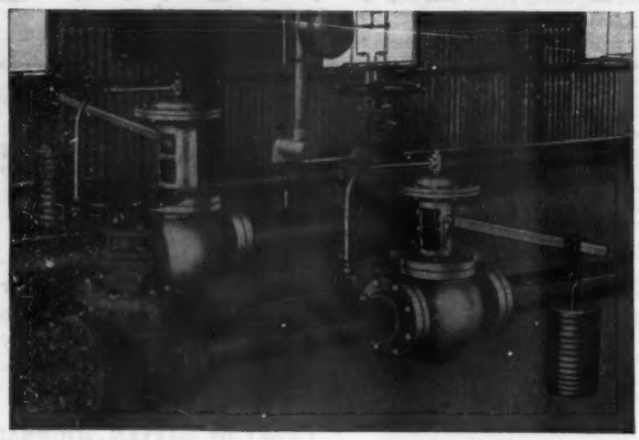


THE illustration shows two C-F Regulators, the larger for winter use when loads are heavy, the smaller for use in summer.

Double settings of C-F Regulators are not uncommon in border stations. They assure smooth and accurate control of either high or lower pressures, whether flow is constant or fluctuating, enlarged or reduced.

There are C-F Regulators for every need of gas regulation. They have been standard in the industry for over forty years. Write for full information.

The Chaplin-Fulton Manufacturing Co.

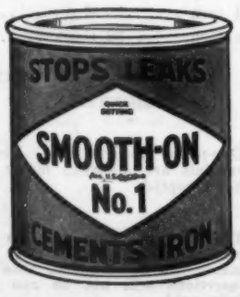
28-40 Penn Avenue **Pittsburgh, Pa.**

Perfect Screw-Thread Joints

BECAUSE its soft metallic body is permanently impassable to any fluid under any working pressure and any temperature, SMOOTH-ON No. 1 will hold perfectly.

SMOOTH-ON No. 1 adheres well to the threads, expands and contracts with the pipe, and fills every minute void with a deposit which can't blow out, shrivel, shrink, or crack from time or heat. Joints sealed with this metallic filler are not affected by vibration or violent change of temperature or pressure.

Try SMOOTH-ON No. 1 on your high-pressure lines, on stills where you have had trouble in avoiding leakage of thin hot oil, etc.



Get the Smooth-On Handbook free from us, and get Smooth-On No. 1 in 1 or 5-lb. can or 25, 50 or 100-lb. keg from your nearest dealer.

SMOOTH-ON Mfg. Co., Dept. 66
570 Communipaw Ave., Jersey City, N. J.

Do it with **SMOOTH-ON**

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